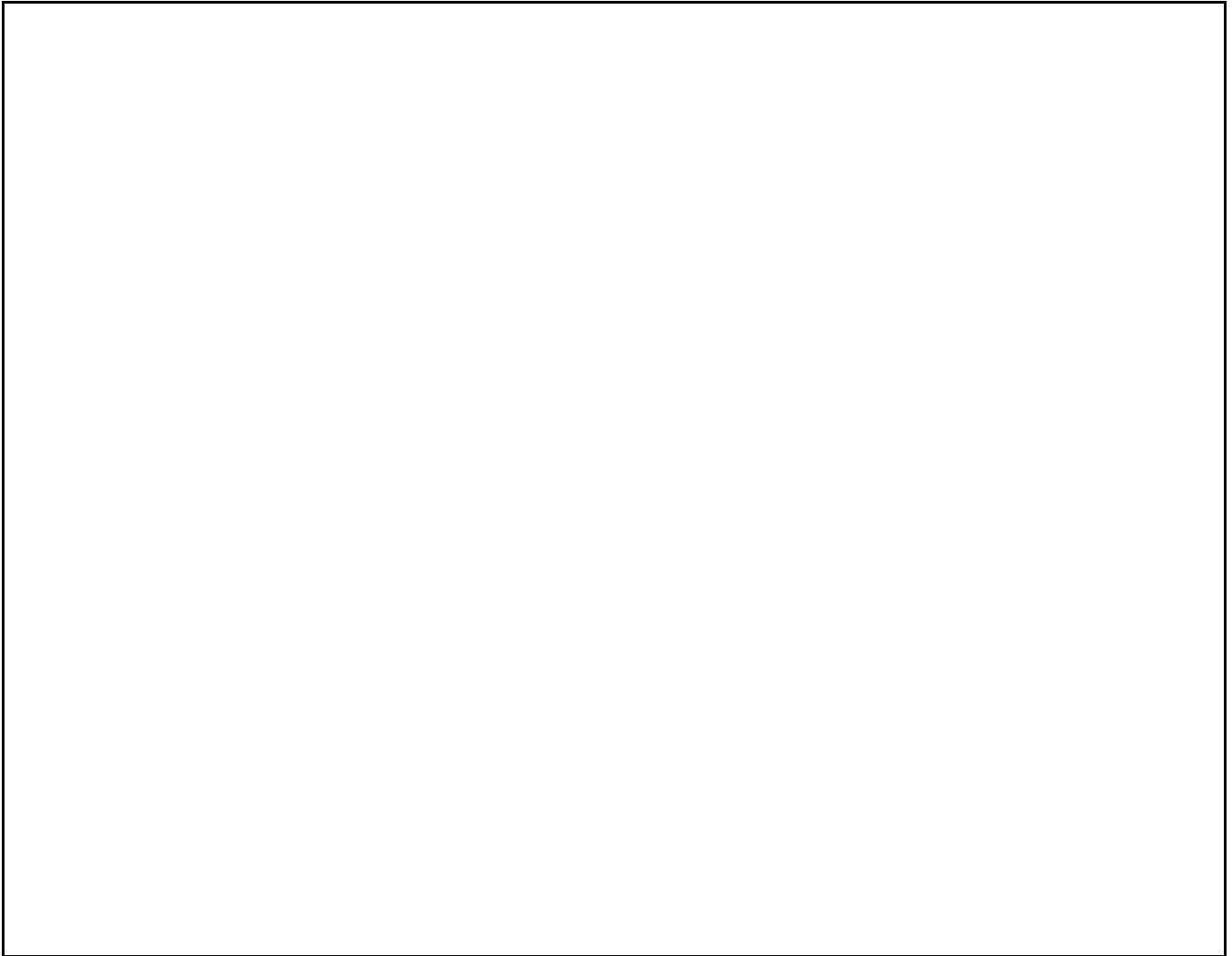


The Butterflies
of
Point Pelee National Park, Ontario



Alan Wormington

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Introduction

In respect to conducting local studies on butterflies, Clench (1979) made a number of statements that summarize well the value of such undertakings: “Studies of this kind have been undertaken so seldom that wherever you choose to do so you will be rewarded with significant data, well worth publishing Among the most important eventual results of such work will be establishing geographic patterns of variation in brood numbers and timing, larval foodplant choice, abundance levels, and other things about which we are still totally, or almost totally, ignorant.”

The List

The original "The Butterflies of Point Pelee National Park, Ontario" (Wormington 1983) listed a total of 68 species. Detailed below are new additions, including the year in which they were first recorded (20 species) or added as a result of taxonomic changes (two species).

Additions due to taxonomic changes:

1994: Summer Azure (*Celastrina neglecta*)¹

1982: Orange Crescent (*Phyciodes cocyta*)²

¹ Summer Azure: always present

² Orange Crescent: this species has likely always been present at Point Pelee; its presence was first reported in 1982.

Additions due to new occurrences:

1913: Crossline Skipper (*Polites origenes*)¹

1955: Horace's Dusky-Wing (*Erynnis horatius*)²

1970s: Regal Fritillary (*Speyeria idalia*)³

1985: Early Crescent (*Phyciodes "euclea"*)⁴

1987: Wild Indigo Dusky-Wing (*Erynnis baptisiae*)

1988: Sachem (*Atalopedes campestris*)

Meadow Fritillary (*Boloria bellona*)

1990: Funereal Dusky-Wing (*Erynnis funeralis*)

1991: Ocola Skipper (*Panoquina ocola*)

Brazilian Skipper (*Calpododes ethlius*)

1992: Sleepy Orange (*Eurema nicippe*)

Harvester (*Feniseca tarquinius*)

1993: Marine Blue (*Leptotes marina*)

Hickory Hairstreak (*Satyrium caryaevorum*)

1994: Long-tailed Skipper (*Urbanus proteus*)

1999: Southern Hairstreak (*Fixsenia favonius*)

2000: Clouded Skipper (*Lerema accius*)

2005: Dainty Sulphur (*Nathalis iole*)

2006: Common Ringlet (*Coenonympha tullia*)

2008: Broad-winged Skipper (*Poanes viator*)

¹ Crossline Skipper

² Horace's Dusky-Wing: A 1955 record of this species came to light after the publication of "The Butterflies of Point Pelee National Park, Ontario" (Wormington 1983).

³ Regal Fritillary: the single Point Pelee record is believed to pertain to either 1975 or 1976.

⁴ Early Crescent: technically this species is undescribed, but the name *euclea* (Bergsträsser,

1780) is tentatively used here to identify this taxon.

A Brief History of Butterfly Study at Point Pelee

George M. Stirrett (former Entomologist at the Dominion Entomological Laboratory, Chatham) made numerous visits to Point Pelee over the years (his first visit was possibly in 1932 when he collected a Common Buckeye), but any record on his visits appear to be lacking.

1882:

- The first known account by a naturalist interested in insects is that of William W. Saunders, who visited Point Pelee on June 29-30; with him were some friends who were interested in Botany. Saunders (1885) published an interesting account that details the butterflies that were encountered on this trip in 1882, in addition to dragonflies and other insect groups. The most significant finds were Mexican Sulphur and Olive Hairstreak, the first records of these species for both Ontario and Canada. Other interesting butterflies that were encountered include Common Sooty-Wing, Zebra Swallowtail and Little Sulphur, all of which were first records for Point Pelee.

1905-1914:

- During these years (but irregularly thereafter) the Great Lakes Ornithological Club was active in the study of birds at Point Pelee. According to Stirrett (1970: 114-115), of the members in this group only Percy A. Taverner appeared to have an interest in insects, even though William E. Saunders (son of William W. Saunders) knew much more on the subject than did Taverner. Taverner's notes regularly mentioned butterflies, including the collection of some specimens in 1909; unfortunately the whereabouts of these specimens (if they still exist) is not known. Interesting finds during these early years included Peck's Skipper (1909), Zebra Swallowtail (1909), Cloudless Sulphur (1914), Common Buckeye (1908) and Tawny Emperor (1909); all of these were new species for Point Pelee, excluding Zebra Swallowtail (first recorded in 1882). Taverner (1908) published a paper entitled "Migrating Butterflies" that pertains to his fall observations at Point Pelee during the years 1905, 1906 and 1907. Taverner on May 28, 1910.
- W.W. Newcomb and Bryant Walker, both of Detroit, were present at Point Pelee on May 30 to June 1, 1909; in the Roll Book of the Great Lakes Ornithological Club, they are registered as guests of Percy A. Taverner. A story on their visit was published in the Detroit News Tribune. On this visit W.W. Newcomb collected a Common Sooty-Wing.
- C.H. Young (former Entomologist at the CNC) was present at Point Pelee on June 1, 1909; May 30 and June 27, 1910; June 6, 1911; and June 29, 1912 (as Great Lakes Ornithological Club).
The only interesting capture on record is Little Sulphur (1910).

1913:

- The Museum of the Geological Survey (now the National Museum of Canada) sponsored an expedition to Point Pelee that lasted from May 15 to July 24 inclusive; insect specimens that were collected are currently in the CNC. Members of the visiting party were Percy A. Taverner, C.H. Young and Clyde L. Patch. A number of significant species were found including Crossline Skipper, Long Dash, Dion Skipper and American Snout-Butterfly — all first records for Point Pelee. Other species of note were Zebra Swallowtail (numerous observations) and Little Sulphur (common). An extensive report on this expedition was published by Taverner (1914), which includes notes on the various flora and faunal groups at Point Pelee (in addition to butterflies). A less detailed report was also published by Patch (1919).

1918:

- Frederick M. Gaige visited Point Pelee on June 6 and 8; on the same trip he also visited nearby Pelee Island on June 6 and 7. The most significant find was the collection of a single Tawny-edged Skipper on June 6, the first and only positive record for Point Pelee; also recorded here was Peck's Skipper on June 8. On Pelee Island he collected a series of Olive Hairstreak (36 specimens in UMMZ); somewhat surprisingly, the species was not recorded again at Pelee Island until 1991.

1920:

- A collecting trip of the Royal Ontario Museum (under the direction of L.L. Snyder) was at Point Pelee from June 10 to August 10 inclusive. Apparently N.K. Bigelow was the only member of the party who collected butterflies; extant specimens now in the ROM all pertain to common species, but among these is the first Bronze Copper recorded at Point Pelee.

1925:

- G. Stuart Walley spent June 3 at Point Pelee

1927:

- F.P. Ide (former Professor at the University of Toronto) visited from June 15 to August 1; several interesting records of this trip include Common Sooty-Wing (numerous), Little Sulphur (numerous), Silvery Checkerspot (first Point Pelee record) and Gray Comma (first Point Pelee record).

1928:

- William F. Lawler on July 29.

1931:

- William J. Brown (former Coleopterist with the CNC) and G. Stuart Walley (former Hymenopterist with the CNC) were repeatedly at Point Pelee during the period of June 24 to July 25 inclusive, having also visited nearby Leamington and Pelee Island on some days. This must have been an exceptional year for butterflies, as demonstrated by their many interesting

captures. These include the first Point Pelee records of Common Checkered-White, Southern Dogface-Sulphur (not recorded again until 2008), Acadian Hairstreak, Aphrodite Fritillary and Baltimore Checkerspot; other noteworthy finds were Zebra Swallowtail and Little Sulphur (numerous observations).

- F.P. Ide visited on June 24 (at least), and presumably was with the researchers as listed above.

1932:

- F.P. Ide visited on August 20.
- D.A. Arnott visited on September 16 — Dominion Entomological Laboratory (Chatham).

1934:

- G. Stuart Walley on September 9.

1934-1940:

- Geoffrey Beall (with other staff members of the Dominion Entomological Laboratory in Chatham) was involved in a long-term study on the migratory habits of the Monarch, in addition to other insects; many observations during these years were conducted at Point Pelee. The result of this research was the publication of two papers detailing several aspects of Monarch migration in southern Ontario (see Beall 1941a, 1941b).

1938:

- Fred A. Urguhart (Professor at University of Toronto) was at Point Pelee from May 5 to September 30; although he concentrated on the collection of Orthoptera (grasshoppers?), a few common butterflies were also obtained (specimens in the ROM).

1941:

- T. Irwin on July 21.

1943:

- Harry B. Wressel was here on September 14, 1943 (Monarch in CNC).

1953:

- D. Monty Wood (former Dipterist at CNC) was present on September 20-21. Highlights on this visit were Common Checkered-Skipper (at least one) and Cloudless Sulphur (which were present in considerable numbers).

1954:

- A party consisting of Paul D. Syme (former Forest Entomologist with the Great Lakes, Douglas Watkins (Toronto) and D. Monty Wood were at Point Pelee on September 24-26. Highlights were several Fiery Skippers (first record for Point Pelee and Ontario), Common Checkered-Skipper (numerous individuals), Little Sulphur, and Common Buckeye (common). M.E. Hearst was present on September 26, but it is not known if this person visited with the

above group; however, a minimum of five Common Gray-Hairstreaks were collected on this date, the first records for Point Pelee.

1955:

- Paul D. Syme visited on September 24-25; certainly the highlight on this visit was the collection of a Horace's Dusky-Wing on the 24th, a new species for Ontario and Canada.

1956:

- Paul D. Syme visited on July 8-9 and August 7; W.W.M. Edmonds on September 4 (Little Sulphur).

1956-1957:

- During these years Monarchs were "tagged" for the first time at Point Pelee under the direction of Fred A. Urquhart; in subsequent years, however, tagging was apparently infrequent. Stirrett (1970: 144) provides a list (derived from Urquhart 1960) detailing several recoveries that were made of Monarchs tagged during these years at Point Pelee.

1958:

- Paul D. Syme visited on August 30; Common Gray-Hairstreak encountered.

1960:

- Richard W. Holzman (Royal Oak, Michigan) visited Point Pelee from August 30 to September 4 inclusive; during this visit two White-M Hairstreaks were obtained (both on August 31), the first records of this species for Ontario and Canada.

1962:

- John B. Walty (Willowdale, Ontario) visited in early July; most noteworthy was the observation of Pipevine Swallowtails that were "much in evidence" at the time, the first record of the species for Point Pelee.

1963:

- John B. Walty returned this year on August 8 (also July 30); on this visit he collected the first Scalloped Sooty-Wing for Point Pelee and Ontario.
- J. Kialty visited on June 1; a few common species were collected (now in the ROM).

1965:

- Jules C.E. Riotte and P.D.N. Hebert, on a collecting trip for the Royal Ontario Museum, were present on June 7, 10 and 29 (at least). Interesting records included Northern Cloudy-Wing (the first and only record for Point Pelee), Zebra Swallowtail and Little Sulphur.

1966:

- William M. Edmonds was at Point Pelee on September 4 (Little Sulphur) — could be 1956.

1967:

- William M. Edmonds returned on August 15-16; he obtained two specimens of Scalloped Sooty-Wing.

1969-1980:

- During this period there was some interest in butterflies by Parks Canada staff, as indicated by numerous specimens that are currently in the insect collection at Point Pelee National Park.
- Numerous Point Pelee observations by visiting naturalists were forwarded for publication to the Toronto Entomologists Association; annual summaries of this organization were started in 1969.
- Entomology students from the University of Guelph (under the direction of Steve A. Marshall) made regular visits to Point Pelee for several consecutive years; interesting finds include Zebra Swallowtail (1978), and first Point Pelee records of both Silvery Blue (1980) and Compton Tortoise-Shell (1976).

1980-present:

- Beginning in 1980 — and continuing each year since — there has been a systematic approach to recording butterfly observations at Point Pelee, including detailed annual summaries (compiled by the author) that are currently on file with Ontario Natural History Press (Leamington); most years these annual summaries were forwarded to the Toronto Entomologists Association for publication. The recent interest in butterflies at Point Pelee (and throughout Ontario) has resulted in a great increase of observations, including the addition of new species at a significant pace.
- In 1982 the author was commissioned by Parks Canada (Cornwall) to intensively investigate Point Pelee for butterflies (in addition to breeding birds); the result was the first annotated list to be published on the butterflies of Point Pelee National Park (Wormington 1983).

- Starting in 1996 (but ending in 1998), the Point Pelee Butterfly Count was conducted each year in early August under the auspices of the North American Butterfly Association. The census area is a standardized 15-mile diameter circle that includes Wheatley and Leamington, etc., in addition to Point Pelee National Park. These formalized counts systematically provided many observations of interest. Results of the first three counts were published in *The Egret* of the Essex County Field Naturalists' Club — 1996 (12), 1997 (13), 1998 (14) and (Wormington & Bore 1998).

Management and Protection of Point Pelee Butterflies

At present, Parks Canada does not have a management plan pertaining to butterflies at Point Pelee National Park. Due to the lack of a management plan, the entire butterfly fauna at Point Pelee is thus seriously at risk. Already it has been documented that several species are now extirpated at Point Pelee due to poor management practices, and several more species are currently at risk of disappearing in the very near future. The problem of paramount preeminence is the ongoing, relentless disappearance of open areas within the park. Open areas provide multiple uses for maintaining a stable butterfly population. The most obvious one is that open areas act as areas where a population can simply exist, where individuals can interact and successful breeding can take place. A secondary function is equally important. It is common knowledge that healthy butterfly populations require abundant nectar sources in order to sustain themselves. Without flowers, individual butterflies will simply wander away from core breeding areas in search of nectar sources, and thus the population of a particular species will quickly become fragmented and dispersed. If nectar sources disappear completely from a location, it puts the entire population of a specific butterfly species at risk.

In the past a number of activities within Point Pelee National Park kept sufficient areas open, and thus nectar sources were relatively stable and common. Such activities included farming and gardening, cattle-raising, cottage areas, park buildings, parking lots, etc. Although such activities are generally categorized as negative impacts within Point Pelee National Park, they nonetheless provided adequate openings and thus critical habitat for butterflies. And it should be noted that such openings are not only critical to butterflies, but also to a whole array of other insect groups including multiple rare species. Other fauna and flora also require open areas at Point Pelee, including such rare species as Prickly-Pear Cactus, Five-lined Skink, Eastern Fox-Snake, and Eastern Mole to name just a few.

Late Dates

Record-late dates for Point Pelee butterfly species (39) that have been recorded on or later than October 1, compared to record-late dates reported for adjacent states as published in *Michigan Butterflies & Skippers* (Nielsen 1999) and *Butterflies and Skippers of Ohio* (Iftner *et al.* 1992).

<u>Species</u>	<u>Point Pelee</u>	<u>Michigan</u>	<u>Ohio</u>
Silver-spotted Skipper	October 30	September 28	October 8
Funereal Dusky-Wing	October 6	no state record ¹	no state record
Wild Indigo Dusky-Wing	October 11	September 25	October 7
Common Checkered-Skipper	October 29	October 31	November 13

Clouded Skipper	October 30	no state record	no state record ²
Least Skipper	October 10	September 27	September 30
Fiery Skipper	October 29	October 26	October 22
Sachem	October 17	November 4	October 26
Ocola Skipper	October 16	no state record	October 7
Pipevine Swallowtail	October 3	"October"	October 5
Giant Swallowtail	October 16	October 7	September 30
Eastern Tiger-Swallowtail	October 11	October 6	September 24
Spicebush Swallowtail	October 24	September 23	October 4
Cabbage White	November 15	December 24	"November"
Common Sulphur	November 16	November 17	December 2
Orange Sulphur	December 1	November 24	December 2
Cloudless Sulphur	October 23	October 13	September 5
Little Sulphur	October 27	October 16	October 25
Bronze Copper	October 20	October 23	October 15
Common Gray-Hairstreak	November 1	October 12	October 10
Eastern Tailed-Blue	October 30	October 16	October 18
Summer Azure	October 30	October 5	September 12
American Snout-Butterfly	November 16	October 5	October 19
Variiegated Fritillary	November 9	October 31	November 22
Summer Crescent (<i>tharos</i>)	October 23	October 8 ³	November 2 ³
Early Crescent (" <i>euclea</i> ")	November 6	no data	no data
Orange Crescent (<i>cocyta</i>)	October 19	August 3	no data
Question Mark	November 23	October 16	November 19
Eastern Comma	December 13	October 15	November 5
Gray Comma	November 8	October 11	October 20
Compton Tortoise-Shell	October 7	November 20	October 31
Mourning Cloak	January 14	November 1	October 27
American Painted-Lady	November 9	October 26	November 27
Common Painted-Lady	December 3	October 16	October 27
Red Admiral	December 11	October 29	October 21
Common Buckeye	November 26	October 22	November 29
Viceroy	October 17	October 5	October 14
Hackberry Butterfly	October 13	September 4	October 16
Monarch	December 4	October 23	November 9

¹ Funereal Dusky-Wing has subsequently been recorded in Michigan (2001)

² Clouded Skipper has subsequently been recorded in Ohio (2000), on dates extending to October 14.

³ the dates of October 8 (Michigan) and November 2 (Ohio) are taken, respectively, from the Pearl Crescent (*Phyciodes tharos*) accounts in Nielsen (1999: 126-127) and Iftner *et al.* (1992: 125-126); these dates could also pertain to Early Crescent (*Phyciodes "euclea"*), which is not recognized in these publications as a distinct species.

SPECIES ACCOUNTS

Silver-spotted Skipper (*Epargyreus clarus*)

— Common Permanent Resident —

First reported by William W. Saunders, who visited Point Pelee on June 29-30, 1882 (see Saunders 1885). Stated to be very common by Percy A. Taverner on September 6, 1909.

Broods and Flight Period:

There are likely three broods at Point Pelee, but the first brood is more common than subsequent generations. The extended first brood is on the wing from early June (rarely late May) to early August. The partial second brood can be expected from early August to the middle of September, or occasionally later. During any single year there is usually a clear separation between the last (worn) individuals of the first brood and the first (fresh) individuals of the second brood; however, records for all years overlap when they are compiled together. In recent years it is probable that a partial third brood has appeared, as indicated by the numerous records into the early part of October (or even later). **Early Dates (first brood):** five (extremely fresh) on May 7, 2000 (Alan Wormington, William G. Lamond *et al.*); one (extremely fresh) on May 15-16, 1998 (Marvin S. Smout, Anne D. Smout) — the season was very advanced in both 1998 and 2000, resulting in numerous sightings immediately following these record-early occurrences. **Late Dates (first brood):** one (ragged) on August 13, 1996 (Alan Wormington); one (ragged) on August 12, 1992 (Alan Wormington). **Early Dates (second brood):** five (extremely fresh males) on July 11, 1999 (Alan Wormington); one (extremely fresh) on July 17, 1998 (Alan Wormington) — these are very early records for the second brood, but the season was very advanced during both of these years. **Late Dates (all broods):** one (extremely fresh) on the exceptional date of October 30, 1999 (Stephen T. Pike, Henrietta T. O'Neill); one (fresh) on October 19, 2010 (Alan Wormington, Henrietta T. O'Neill); one (fairly fresh) on October 12, 1998 (Robert J. Yukich, Karen R. Yukich).

Abundance:

During the flight period of the second (partial) brood, it is unusual to encounter more than a single individual; **Maximum Counts:** 89 (extremely fresh to worn) on July 6, 1995 (Alan Wormington); 40 (mostly fresh) on July 1, 1990 (Alan Wormington, Kevin A. McLaughlin, William G. Lamond); 23 (extremely fresh) on May 9, 2000 (Henrietta T. O'Neill, Alan

Wormington *et al.*) is a remarkable count for the very early date; and 24 (extremely fresh) is an exceptional count for the late date of September 24, 2010 (Alan Wormington, J. Michael Tate). The high count for the second (partial) brood is only eight, recorded on August 7, 1999 (4th Annual Butterfly Count). Although difficult to interpret, it should be noted that Percy A. Taverner (unpublished notes) stated that the species was “very common” on September 6, 1909; this would imply an abundance of the second brood that is greater than what has been recorded in modern times.

Larval Foodplants:

Many species of legumes (Fabaceae) are utilized, with locusts (*Robinia*) stated as the favoured genus (Scott 1986: 470-471). The introduced Black Locust (*Robinia pseudoacacia*) is abundant at Point Pelee and is undoubtedly used on a regular basis; other species probably utilized regularly include tick-trefoils (*Desmodium*) and Hog Peanut (*Amphicarpaea bracteata*).

Near the Visitor Centre a large larva of Silver-spotted Skipper was found on Showy Tick-trefoil (*Desmodium canadense*) on September 1, 1993 (Alan Wormington). Also one was egg-laying on this same plant, also at the Visitor Centre, on July 3, 2013 (Alan Wormington).

Subspecies:

The subspecies present in eastern North America (including Point Pelee) is nominate *clarus*.

Long-tailed Skipper (*Urbanus proteus*)

— Extremely Rare Immigrant —

The tropical Long-tailed Skipper is normally found as a permanent resident no further north than Florida and southern Texas; each year the species advances northward from these areas into the lower Mississippi River Valley and along the coastal plain of the southeast United States (Opler & Krizek 1984: 200-201). Adjacent to Ontario the Long-tailed Skipper has been found once in Michigan at Belle Isle on the Detroit River, sometime prior to 1913 (Moore 1960: 26); in Ohio there are three known occurrences for the state (Iftner *et al.* 1992: 28-29).

Obviously, this species should not be expected to occur in Ontario under normal circumstances. Nonetheless, in 1994 single individuals were found at both Point Pelee and Windsor, representing the first records for both Ontario and Canada (Layberry *et al.* 1998:32); the Windsor occurrence was at the Ojibway Prairie Nature Reserve on September 18, 1994 (G. Tom Hince *et al.*). During 1994 an unprecedented flight of Long-tailed Skipper was recorded along the east coast of the United States (Cech 1994), with individuals reportedly found as far north as Massachusetts.

Broods and Flight Period:

In the deep south the Long-tailed Skipper produces at least three broods as indicated by Klots (1951: 207 and 210), but the species may be inactive during the winter months (Opler & Krizek 1984: 200-201). The freshness of the Point Pelee specimen indicates that it could not have travelled any great distance — certainly a female must have arrived earlier in the season (most likely during June) and then laid some eggs. However, whether this occurred at Point Pelee National Park, or somewhere relatively nearby, will never be known. The Point Pelee individual is probably a representative of the third brood of the species.

Abundance:

A single individual (a fresh male) was encountered at West Beach on August 7, 1994 (Alan Wormington, Paul R. McGaw, Carolyn D. King, John A. McDonald; specimen in ONHP); when discovered it was nectaring on the flowers of Spotted Knapweed (*Centaurea maculosa*). An account of this occurrence was published by the author (Wormington 1995a), who stated in part ... “As the group leader [of an outing of the Federation of Ontario Naturalists], I decided to start the day at West Beach where a few stands of Spotted Knapweed were in bloom. Little did we know that considerable excitement would be generated just moments after we parked the cars. While waiting for the group to get ready (it was about 10:00 a.m.), I was casually looking at a clump of flowers when I noticed what initially appeared to be a Silver-spotted Skipper. However, a split second later I realized there were ‘tails’ hanging down from the wings, whereupon I yelled ‘Long-tailed Skipper!’ to the rest of the group.”

Larval Foodplants:

These include a wide variety of legumes (Fabaceae); in the southern United States this species is occasionally a pest on cultivated beans (*Phaseolus*). It is not known if the species ever reproduced at Point Pelee, but any number of known foodplants could have been utilized either at or near our area.

Subspecies:

The Long-tailed Skipper is monotypic, with no recognized subspecies.

Northern Cloudywing (*Thorybes pylades*)

— Former Permanent Resident (Extirpated) —

This is not a migratory species, indicating that the species was formerly a permanent resident at Point Pelee, now extirpated.

Broods and Flight Period:

One brood in the Great Lakes area. In nearby Windsor the species is on the wing generally from early May to mid-July, although there are two records from mid-August.

Abundance:

The only record known for Point Pelee is a single (fresh) male that was obtained on June 29, 1965 (Jules C.E. Riotte, P.D.N. Hebert; specimen in ROM).

Larval Foodplants:

Legumes (Fabaceae) are utilized as foodplants, including tick-trefoil (*Desmodium*), Alfalfa (*Medicago sativa*) and several species of clover in the genus *Trifolium* (Scott 1986: 479-480); any of these species could have been used at Point Pelee when the species was formerly resident.

Subspecies:

Despite the wide range of Northern Cloudywing, the species is monotypic with no subspecies recognized.

Hayhurst's Scallopwing (*Staphylus hayhurstii*)

— Former Resident (Extirpated) —
— Extremely Rare Immigrant —

No record for Michigan (Nielsen 1999).

The former status of this species at Point Pelee is not well understood. For example, in Ohio where the species is fairly widespread, Iftner *et al.* (1992: 32-33) state in part that “Colonies are very temporary, and are very succession sensitive ... Typically, populations inhabit recently disturbed habitats ... As these areas undergo succession and are transformed into old field communities, *S. hayhurstii* populations decline to the point of localized extinction ...” It is, therefore, more than curious that all known occurrences at Point Pelee (excluding a single record in 1988) were found only during the years 1963 to 1976 inclusive. This indicates that the Point Pelee population was not permanent but perhaps of a temporary nature. However, the occurrence of a presumed stray in 1988 indicates that the species could eventually colonize Point Pelee once again, if only temporarily.

The Hayhurst's Scallopwing is a very rare species in Ontario; other than Point Pelee, the species is known only from Pelee Island where resident populations are apparently still extant (*e.g.*, at Fish Point and Lighthouse Point).

Broods and Flight Period:

On nearby Pelee Island, where the species is currently a permanent resident, two broods have been recorded but the first is much less common than the second; at that locality the species has been recorded from June 14 to July 18 (first brood) and July 28 to September 14 (second brood). July 18 record was in 1992 (a very late year) by Jeff Larson; otherwise the latest is July 7, 1965 (ex fresh). Undoubtedly there were two broods at Point Pelee, but there are no known records of the first brood which was presumably on the wing from the middle of June to early July. Excluding a stray in 1988 that presumably originated from the second brood (on July 17), other records for this brood at Point Pelee extend from July 31 to August 18 inclusive. **Early Date (second brood):** one (fresh) on July 17, 1988 (Donald G. Cecile). **Late Date (second brood):** one (worn) on August 18, 1975 (Doug Brown).

Abundance:

The Hayhurst’s Scallopwing was formally a resident at Point Pelee as indicated by the numerous records during the years 1963 to 1976 inclusive. All known records pertain to single individuals. The species was probably fairly common at Point Pelee, but not necessarily widespread. Sidney M. Daniels (personal communication to the author) provides the only information on where the species occurred — the single individual he encountered in 1971 was at East Beach.

1963:	August 8	1 worn	John B. Walty	specimen in ROM
1967:	August 15	1 ex. fresh	William M. Edmonds	specimen in CNC
	August 16	1 ex. fresh	William M. Edmonds	specimen in CNC
1971:	<u>August 7</u>	1	Sidney M. Daniels	
1975:	August 18	1 worn	Doug Brown	specimen in PPNP
1976:	July 31	1	Darryl Stewart	

In addition to the above records, the only other occurrence known for Point Pelee concerns a probable stray; during the drought year of 1988, one (fresh) individual was closely examined on July 17 at the Visitor Centre septic field (Donald G. Cecile).

Larval Foodplants:

The non-native Lamb’s Quarters (*Chenopodium album*) is the usual foodplant (Opler & Krizek 1984: 206-207); it is probable that various amaranths (Amaranthaceae) are also utilized (*e.g.*, see Scott 1986: 484). These plants are found at Point Pelee (Jellicoe 1984: 9-10), where they are apt to be encountered in disturbed sites.

Subspecies:

The Scalloped Sooty-Wing is monotypic, with no recognized subspecies.

Juvenal’s Dusky-Wing (*Erynnis juvenalis*)

— **Rare to Uncommon Immigrant and Temporary Resident** —
— **Rare Permanent Resident?** —

This woodland species is surprisingly scarce at Point Pelee and, as such, may be our rarest permanent resident. Very few individuals are recorded each year and during some recent years (such as 1992, 1996 and 1997) the species was not recorded at all. Within the park the species has been recorded from The Dunes Picnic Area to the Tip; most individuals are found along the west beaches. There appears to be no discernible pattern of the records to indicate any core area of abundance. The scarcity of this species implies that its existence at Point Pelee is tenuous, indicating that it could become extirpated in the near future.

Broods and Flight Period:

At Point Pelee (and elsewhere in the northern part of its range) there is a single brood only with a short flight season extending from early to late May; in adjacent areas where the species is more numerous (*e.g.*, Windsor) the flight season regularly extends from mid-April to late June. ***Early Dates:*** one (extremely fresh) on May 4, 1991 (Alvaro P. Jaramillo, Bennett Hennessey); four (extremely fresh to worn) on May 6, 1999 (Alan Wormington *et al.*). ***Late Dates:*** one (worn) on June 14, 2008 (Alan Wormington); one (worn) on June 10, 1981 (Alan Wormington); one (worn) on June 10, 2000 (Henrietta T. O'Neill).

Abundance:

During most years sightings usually pertain to single individuals only. However, during the years 1999, 2000 and 2001, a significant number of immigrants appeared when several individuals could be found per day. ***Maximum Counts:*** 66 (fresh to worn) on May 7, 2000 (Alan Wormington, William G. Lamond, Kevin A. McLaughlin, S. Bruce Kellett) — this is an exceptional count, as excluding 2000 and 1999 (two years when immigrants inexplicably appeared in numbers) the maximum daily count was only two (recorded in 1985, 1986, 1987 and 1995).

Larval Foodplants:

Numerous oaks (*Quercus*) in both the “red” and “white” groups are used as larval foodplants (Opler & Krizek 1984: 209-210); any or all of the five species of oak found at Point Pelee, as listed by Jellicoe (1984: 9), could be utilized.

Subspecies:

Nominate *juvenalis*, ranging throughout eastern North America, is the subspecies present at Point Pelee.

Horace's Dusky-Wing (*Erynnis horatius*)

— Rare Immigrant and Temporary Resident —

In areas adjacent to Ontario the species is a permanent resident in several counties of extreme southern Michigan, where it has been reported from April 30 to August 10 (Nielsen 1999: 187).

Although the Horace's Dusky-Wing has been claimed for numerous locations in southern Ontario (*e.g.*, see Holmes *et al.* 1991: 19), most of these records are based on misidentifications. Most of the specimens on which this distribution is based have been examined by the author, and many pertain to the expected Juvenal's Dusky-Wing. The only authentic Ontario specimens I have seen — in addition to the Point Pelee occurrences — are individuals from Rondeau Provincial Park, Kent County (1965, J.C.E. Riotte, P. Hebert, specimen in ROM); Colchester, Essex County (Paul D. Pratt); and Pelee Island, Essex County (1991, Kirk W. Zufelt).

Broods and Flight Period:

This species is probably triple-brooded throughout most of its northern range; the first brood, however, is probably not prone to wandering. At Point Pelee the species has been found on June 14 (first brood), from July 6 to August 20 (second brood) and August 30 to September 24 (third brood).

Abundance:

The Horace's Dusky-Wing has been recorded during nine different years at Point Pelee. Most individuals have been found from West Beach to the west side of the Tip, a rather confined area; single individuals have also been found east of White Pine Picnic Area, as well as the middle section of the Woodland Nature Trail. **Maximum Count:** four (fresh females) on August 12, 2000 (Alan Wormington).

1955:	September 24	1 fresh _	Paul D. Syme
1988:	August 11	1 not fresh _	Alan Wormington
	August 13	1 worn _	Jeffrey L. Larson <i>et al.</i>
1991:	July 14	1 fairly fresh _	Alan Wormington
	August 12	1 fresh _	Gregory C. Daniels, Sidney M. Daniels, Robert Curry
1992:	July 31-August 1	1 fresh _	Jeffrey L. Larson <i>et al.</i>
1993:	August 14	1 fresh _	Tim Sabo
1994:	September 11	1 extremely fresh _	Tim Sabo, Alan Wormington
2000:	August 12	4 fresh _	Alan Wormington
2008:	June 14	1 worn _	Robert J. Yukich, Karen R. Yukich
	August 9	1 worn _	Alan Wormington

August 17	1 worn _	Alan Wormington, Adam J. Hall, Rosalee A. Hall
August 23	1 extremely fresh _	Alan Wormington
August 26	1 not fresh _	Stephen T. Pike, Alan Wormington
September 1	1 fresh _	Adam J. Hall, Rosalee A. Hall, Alan Wormington, Marianne B. Reid
September 1	1 worn _	Alan Wormington, Adam J. Hall, Rosalee A. Hall, Marianne B. Reid
September 2	1 extremely fresh _	Alan Wormington

Larval Foodplants:

There is no definite evidence that this species has ever reproduced in Ontario, even though potential foodplants are abundant; various oaks (*Quercus*) are utilized in the south, with "red" oaks favoured over others according to Opler & Krizek (1984: 210-211). One author that has stated that Chinquipin Oak (*Quercus muehlenbergii*) is a preferred foodplant.

The Horace's Dusky-Wing observed at West Beach on August 13, 1988 (a worn female), was seen to lay a single egg on Frost Grape (*Vitis riparis*), which is not a known foodplant. The egg was retained and the larva (which hatched on August 18) was fed one of the red oaks, but it died on August 22 (Jeffrey L. Larson).

In 2000, at West Beach, individual females were observed egg-laying on saplings of Chinquipin Oak (*Quercus muehlenbergii*). On July 22 an individual laid a single egg that hatched in August (Alan Wormington, Jan Kraft). On another Chinquipin Oak, one or more females laid at least 20 eggs in August; by August 12 about half of these eggs had hatched, and a single larvae (about one centimetre in length) was found. In both instances, eggs were placed on small emerging leaves at the tip of each branch.

Subspecies:

The Horace's Dusky-Wing is monotypic with no recognized subspecies.

Funereal Dusky-Wing (*Erynnis funeralis*)

— Extremely Rare Immigrant —

The Funereal Dusky-Wing is a desert species not normally found north of the southwest United States; however, it is a well-known wanderer with occurrences north and east to northern Indiana (Shull 1987: 41) and, remarkably, southern Ontario. Although the species remains unrecorded in Ohio (Iftner *et al.* 1992), there are now a total of 26 occurrences for Ontario, the only known occurrences in Canada (Layberry *et al.* 1998: 40).

For Michigan, Nielsen (1999) does not include the species; however, the species occurred in that state in 2001 at Whitefish Point on Lake Superior.

The first record for Ontario involved a sighting at Colchester, Essex County, in June, 1981 (G. Tom Hince); for some years this observation was considered questionable, but in light of subsequent records at both Point Pelee (1990, 1992 and 2010) and elsewhere, it should now be considered valid. Certainly the most amazing occurrences in Ontario are the series of six separate

records for *Toronto* — 1998 at Sylvan Park; 1999 at High Park; and 1999 at Lambton Prairie. Three of these were discovered by the same person — Robert J. Yukich!

Finally, there is yet another record of Funereal Dusky-Wing, from just north of Point Pelee National Park. A fresh individual was found in a backyard on Concession Road D on September 7, 2010 (Henrietta T. O'Neill *et al.*).

Broods and Flight Period:

... the freshness of all Point Pelee individuals suggest that they had not travelled very far to reach our area; however, it can only be speculated as to whether they were raised nearby or much further afield ...

Abundance:

This species has been found at Point Pelee 1990, 1992 and 2010, when single individuals were encountered each time; the details of these records are as follows:

One (fresh female) was found at the west side of the Tip on October 6, 1990 (Alan Wormington, James N. Flynn; specimen in ONHP); details of this record were published by the author (Wormington 1991). A subsequent note presented further comments on the species, in addition to a clarification on the status of Zarucco Dusky-Wing (*Erynnis zarucco*) in Ontario, a closely related species of which there is one known record for the province (Wormington 1992b).

In 1992 the Funereal Dusky-Wing was found again at Point Pelee when an extremely fresh male was encountered at the west side of the Tip on September 23 (Alan Wormington, Stephen T. Pike; specimen in ONHP); this individual was detected just after the passage of a very strong cold front.

One of the most exiting butterfly events ever at Point Pelee was the multiple observations of Funereal Dusky-Wing during the fall of 2010, when a widespread incursion was obviously taking place. Sightings began on September 5, when one was found at West Beach (Alan Wormington); this individual was alternating between nectaring on Spotted Knapweed and resting on the ground, and appeared immediately after several days of strong west winds and an associated cold front. Observations during this incursions were as follows:

September 5, 2010: one fresh, West Beach (Alan Wormington)

September 7, 2010, one fresh on Concesssion Road D, just north of the Park (Henrietta T. O'Neill)

September 20, 2010: one fresh, West Beach (Alan Wormington)

Larval Foodplants:

It is perhaps unlikely that this species has ever successfully reproduced in Ontario; nonetheless, potential larval foodplants are widespread. In its normal range various species of legumes (Fabaceae) are utilized.

Subspecies:

There are no recognized subspecies of Funereal Dusky-Wing. Although some authors consider *funeralis* and the similar Zarucco Dusky-Wing (*Erynnis zarucco*) as pertaining to subspecies of a single species (*e.g.*, see Scott 1986: 656), most authors treat the two as distinct entities.

Wild Indigo Dusky-Wing (*Erynnis baptisiae*)

— Rare Immigrant and Seasonal Colonist —

Formerly this species was considered extremely local in the Great Lakes Region, usually found only in widely separated colonies in association with Wild Indigo (*Baptisia tinctoria*), its usual foodplant. For example, in Ontario the species was historically recorded only from a few widely scattered localities including Windsor, Leamington, Walpole Island and Wilson Tract Historically it was also known from Leamington, where specimens (now in the CNC) were collected in 1937 by G. Stuart Walley.

In recent years, in the US and in Ontario, Crown Vetch (*Coronilla varia*) has been planted along highways as a ground cover. In Michigan, where Crown Vetch has apparently not been planted extensively, Wild Indigo Dusky-Wing is still rather restricted in its range where it is known from only six southeastern counties of the state (see Nielsen 1999: 190-191). The multiple occurrences of this species at Point Pelee during the past several years is undoubtedly a result of this ongoing trend of planting Crown Vetch.

The first Point Pelee record of Wild Indigo Dusky-Wing occurred under rather unusual circumstances. While conducting a breeding bird survey in agricultural lands for the Canadian Wildlife Service, I was investigating a soybean field about 4 km due north of Point Pelee National Park on August 13, 1987. Along a very barren edge of the field I was surprised to encounter a dusky-wing that, remarkably, I was able to capture by hand. Subsequently it was identified as a Wild Indigo Dusky-Wing, and this prompted me to consider the remote possibility that the species could appear at Point Pelee. Imagine my surprise when *the very next day* (August 14), at the west side of the Tip, I actually found the first Wild Indigo Dusky-Wing for Point Pelee!

Broods and Flight Period:

Early Dates: one (fairly fresh) on June 16, 1991 (Alan Wormington); one (extremely fresh male) on June 29, 1999 (Alan Wormington). ***Late Dates:*** one (worn) on October 11, 2007 (J. Michael Tate); one (fairly fresh male) on October 10, 2008 (Alan Wormington); one (worn male) on October 3, 2000 (Alan Wormington, Kevin A. McLaughlin, Robert L. Waldhuber).

Abundance:

Maximum Counts: six (fresh to worn) on September 7, 2008 (Alan Wormington); five (fresh to not fresh) on September 10, 1995 (Tim Sabo, Alan Wormington); four (extremely fresh) on August 28, 1993 (Alan Wormington, Robert Curry, Tim Sabo).

Larval Foodplants:

As its name implies, Wild Indigo (*Baptisia tinctoria*) along with closely-related species are the usual larval foodplants. However, in recent years the species has adapted to the introduced Crown Vetch (*Coronilla varia*) as a larval foodplant as published by Shapiro (1979); this plant is now

widespread along highway margins, railway embankments and other waste areas, allowing this butterfly to expand its range and numbers considerably (Opler & Krizek 1984: 213-214).

When Crown Vetch was first detected at Point Pelee (Black Willow Beach) the stand was investigated for several years thereafter, but no Wild Indigo Dusky-Wings were ever found there. Crown Vetch also colonized parts of the old Maintenance Compound starting around 2006, but this site too has failed to attract any butterflies. In 1993 Wild Indigo Dusky-Wing reproduced at Point Pelee where it was found (at the Sparrow Field) in close association with stands of Showy Tick-Trefoil (*Desmodium canadense*), the presumed larval foodplant.

Subspecies:

Throughout its range the Wild Indigo Dusky-Wing is monotypic with no recognized subspecies.

Common Checkered-Skipper (*Pyrgus communis*)

— Extremely Rare Immigrant —
 — Extremely Rare Seasonal Colonist? —

Historically the species apparently occurred more frequently in Ontario, as there are records for Kitchener (1937), St. Catharines (1939 to 1965) and Windsor (1988, 1992). In areas adjacent to southern Ontario, the species is curiously found much more frequently; for example, in Michigan (Nielsen 1999: 194-195) the species has been recorded in most counties in the southern half of the Lower Peninsula, in addition to two counties in the Upper Peninsula.

(1) ex fr _	September 16, 2000	Alan Wormington	in AW
(1) ex fresh	September 21, 1953	D. Monty Wood	in CNC
(2) ex fresh	September 24, 1954	D. Monty Wood	in CNC - only 1 seen by AW
(1) f fresh	September 24, 1954	P.D. Syme	in ROM
(1) f fresh	September 24, 1954	D. Watkins	in ROM
(3) f fresh	September 25, 1954	P.D. Syme	in ROM
(1)	September 25, 1954	P.D. Syme	in PDS
(1)	September 13, 1975	Darryl Stewart	in DS
(1) fresh	October 29, 1999	Henrietta T. O'Neill	in AW

August 15, 1936: one at Essex (D.A. Arnott; specimen in CNC)

August 2, 1999: one at Pelee Island (Tom Hanrahan)

September 2, 1999: one at Pelee Island (Tom Hanrahan)

October 22, 2007: one at Amherstburg (Jeffrey L. Larson)

September 16, 2008: one extremely fresh female at Seacliff (Alan Wormington)

Broods and Flight Period:

Active year-round in the southern United States ...

Abundance:

There are records for only six different years at Point Pelee, namely 1953, 1954, 1975, 1999, 2000 and 2008; these occurrences are as follows:

In 1953, a single specimen was collected on September 21 (D. Monty Wood; specimen in CNC).

In 1954, at least eight specimens were collected on September 24-25 (Paul D. Syme, D. Monty Wood, D. Watkins; specimens in CNC and ROM); presumably additional individuals were also observed on this visit, but were not collected.

One on September 13, 1975 (Darryl Stewart).

On October 29, 1999, an extremely fresh xxx was found at the Sparrow Field (Henrietta T. O'Neill).

One (extremely fresh male) at the west side of the Tip on September 16, 2000 (Alan Wormington *et al.*).

Since 2010, the species has been seen every year except 2013.

Larval Foodplants:

Numerous species of mallow (Malvaceae) are selected as larval foodplants (Scott 1986: 495-496); although a few members of this plant family are present at Point Pelee (Jellicoe 1984: 14), there is no evidence that Common Checkered-Skipper has ever reproduced here.

Subspecies:

Despite its wide range, there are no recognized subspecies of Common Checkered-Skipper.

Common Sooty-Wing (*Pholisora catullus*)

— Rare Immigrant and Seasonal Colonist —
— Former Permanent Resident —

Common Sooty-Wing was first reported at Point Pelee by William W. Saunders, who visited here on June 29-30, 1882 (see Saunders 1885). In 1909 a specimen of Common Sooty-Wing was collected on May 30 by W.W. Newcomb (specimen in UMMZ). Historically this species was probably quite common at Point Pelee due to the extensive farm operations that were so widespread here (larval foodplants thrive in such situations); an observation in 1971 (Lewis Bevan) might well have been the last record of this population.

In recent times the status of this species at Point Pelee has become rather erratic and complex. After 1971 the species was not recorded again at Point Pelee until 1988, when four different strays were found on dates ranging from June 19 to August 21; during that year it was noted that the species was unusually common in agricultural areas adjacent to Point Pelee. During every year since 1988 (except 1990 and 2001) a few strays have been found; during this period individuals were consistently found at the Visitor Centre septic field (1991) and opposite The Dunes at the old Camp Henry site (1994) indicating that it probably became a seasonal colonist.

In recent years the species has also been recorded regularly at North Dike, where it was first detected in 1993 (Alan Wormington); at this location it is a seasonal colonist and perhaps a temporary resident. This site is adjacent to agricultural fields which likely influences this population to a considerable degree.

(1) May 30, 1909 W.W. Newcomb in UMMZ

Broods and Flight Period:

There are two broods at Point Pelee. Generally, the species can be expected from late May to late June (first brood) and late July to late August (second brood). ***Early Dates (first brood):*** one (extremely fresh) on May 7, 2000 (Thomas A. Hanrahan) — immediately following this observation, there were several additional early observations; one (extremely fresh male) on May 22, 1998 (Alan Wormington, Henrietta T. O'Neill). ***Late Dates (first brood):*** one (fresh female) on July 2, 1927 (F.P. Ide); one (extremely fresh male) on June 30, 1996 (Alan Wormington), perhaps an early second brood specimen ***Early Dates (second brood):*** one (extremely fresh female) on July 13, 1998 (Alan Wormington); one (fresh) on July 14, 1991 (Alan Wormington). ***Late Dates (second brood):*** one (fresh female) on August 29–September 1, 1994 (Alan Wormington); one on August 27, 1993 (Donald G. Cecile).

Abundance:

This species is usually encountered as single individuals only, but on a few occasions more may be found. ***Maximum Counts:*** seven on August 10, 1996 (Paul D. Pratt *et al.*); four (extremely fresh males) at the North Dike on August 20, 1995 (Alan Wormington); four on August 10, 1996 (Paul D. Pratt *et al.*).

Larval Foodplants:

Hosts include members of the goosefoot (Chenopodiaceae) and amaranth (Amaranthaceae) families (Scott 1986: 498-499). Throughout southern Ontario, including Point Pelee, the foodplant most often used is undoubtedly Lamb's Quarters (*Chenopodium album*), which is a common weed in agricultural fields and other disturbed areas.

On August 25, 1996, a fresh female was observed ovipositing on Green Amaranth (*Amaranthus retroflexus*) at the old Camp Henry site, which is opposite The Dunes Picnic Area (Alan Wormington).

Subspecies:

The wide-ranging Common Sooty-Wing is monotypic with no recognized subspecies.

Clouded Skipper (*Lerema accius*)

— Extremely Rare Immigrant —

This species is resident along the southeast coastal plain in the United States but wanders northward along the east coast in late summer and fall, very rarely to New York (Opler & Krizek 1984: 221-222; Cech 1993). West of the Appalachian Mountains the species occurs northward much less frequently. Clouded Skipper has been recorded in Indiana (Shull 1987: 48), Illinois and Kentucky. Up to 2000 there were no known records for either Ohio or Michigan, but during that year the species was recorded at several locations in Ohio (see Parshall & Davidson 2000; and Styer 2000). The year 2000 must have been exceptional for the species, since in addition to the occurrence at Point Pelee and widespread records in Ohio, I personally found the species rather numerous at Kentucky Dam in western Kentucky during a brief stop there while travelling through the area.

Broods and Flight Period:

... active year-round (?) in southern United States (seen mid-February by AW in SE Louisiana).

Abundance:

One (worn female) at the Sparrow Field on October 30, 2000 (Henrietta T. O'Neill); see O'Neill & Wormington (2001).

Larval Foodplants:

... start

Subspecies:

The Clouded Skipper is monotypic with no recognized subspecies.

Least Skipper (*Ancyloxypha numitor*)

— Abundant Permanent Resident —

First reported by William W. Saunders, who found the species during a visit to Point Pelee on June 29-30, 1882 (Saunders 1885)

Broods and Flight Period:

From the middle of June to the middle of September. ***Early Dates:*** one (extremely fresh) on

May 27, 1998 (Alan Wormington); excluding 1998, when there were multiple sightings in late May, the next earliest record is one (extremely fresh) on May 31, 1982 (Alan Wormington). **Late Dates:** one (worn) on October 10, 1995 (Alan Wormington); one (worn) on October 3, 1983 (Alan Wormington).

Abundance:

Due to the difficulties of surveying large sections of the Pelee Marsh, maximum counts do not accurately reflect the true abundance of this species.. **Maximum Counts:** 73 on August 7, 1999 (4th Annual Butterfly Count); 64 on August 8, 1998 (3rd Annual Butterfly Count); five (extremely fresh) were observed on the very early date of May 30, 1998 (Alan Wormington).

Larval Foodplants:

Numerous species of grass (Poaceae) are known foodplants (Scott 1986: 431), many of which are found at Point Pelee including Rice Cut Grass (*Leersia oryzoides*), bluegrasses (*Poa*), foxtails (*Setaria*) and panic grasses (*Panicum*), as listed by Jellicoe 1984: 5-6).

Subspecies:

The Least Skipper is monotypic with no subspecies recognized.

European Skipper (*Thymelicus lineola*)

— **Common Permanent Resident** —

The first record for Michigan was in 1925 when the species was found in Wayne County in the extreme southeast corner of the state; this also represented the first record for the entire United States (Nielsen 1999: 201-202). Three specimens were collected at Amherstburg, Essex County, on June 23, 1930 (S. Moore; specimens in UMMZ). Based on these early records, it can be interpreted that the European Skipper first occurred at Point Pelee probably in the late 1920s or early 1930s. However, the earliest record actually known for our area appears to be in 1979. Nearby Pelee Island has records for 1950 (specimens in ROM), so it can be assumed that the species was present at Point Pelee well before that time.

Although the species has been relatively abundant at the North Dike for some time, elsewhere in the park it has clearly increased during recent years; this is likely due to open areas becoming increasingly grass-covered (less sandy) and the corresponding increase of flowering plants at these sites. For example, the species is now common from West Beach to the Tip, an area where it was formerly absent or nearly so until recently.

Broods and Flight Period:

A second (partial) brood was recorded for the first time when two (fresh) were found on July 27, 1988 (Donald G. Cecile). On the mainland adjacent to Point Pelee the second brood is perhaps an annual event, but involving low numbers only. During the first two years of the Point Pelee Butterfly Count (conducted in early August), the species was recorded in 1996 and 1997. **Early Dates:** one (extremely fresh) on June 1, 1998 (Alan Wormington); one (extremely fresh) on June 6, 1999 (Alan Wormington). **Late Dates (first brood):** one (worn) on July 20, 1992 (Alan Wormington); one (not fresh) on July 17, 1989 (Alan Wormington).

Abundance:

... **Maximum Counts:** 159 (fresh) on July 1, 1996 (Alan Wormington); 117 (extremely fresh) on June 22, 1993 (Alan Wormington); 30 (extremely fresh) were counted on the very early date of June 9, 1991 (Alan Wormington).

Larval Foodplants:

Scott (1986: 433) lists Timothy (*Phleum pratense*) as the favoured foodplant; this is undoubtedly the foodplant utilized at Point Pelee.

Subspecies:

Populations in North America are nominate *lineola*.

Fiery Skipper (*Hylephila phyleus*)

— **Rare to Uncommon Immigrant and Seasonal Colonist** —

During twenty years (from 1981 to 2001), the species was recorded every year at Point Pelee except 1984, 1989, 1992 and 1996.

- | | | | |
|-----|--------------------|--------------------|--------|
| (1) | September 24, 1954 | D. Monty Wood | in PDS |
| (1) | September 25, 1954 | D. Monty Wood | in PDS |
| (1) | September 25, 1954 | P.D. Syme | in ROM |
| (2) | September 25, 1955 | P.D. Syme | in PDS |
| (3) | September 7, 1974 | John E. Pilkington | in JEP |

Broods and Flight Period:

This species can be expected at Point Pelee anytime from late July to the middle of October, but is not likely to be present continuously during this period except during years of above-average abundance. After immigrants arrive, a single brood is produced locally; during some years it is probable that even a second brood is produced, if immigrants arrive early in the season (as they

did in 1994, 1999 and 2000). **Early Dates:** one (not fresh female) on May 13, 2000 (Alan Wormington); one (not fresh male) on June 1, 1994 (William G. Lamond); one (extremely fresh male) on June 6, 1999 (Alan Wormington *et al.*) — all three of these observations are exceptionally early for the entire Great Lakes Region; in comparison, the earliest dates published for states adjacent to extreme southern Ontario are July 12 for Michigan (Nielsen 1999: 202-203) and July 17 for Ohio (Iftner *et al.* 1992: 45). Excluding the series of very early observations as listed above, the earliest to be recorded during other years is July 20 (in 1998). **Late Dates:** one (male) on October 29, 1999 (Henrietta T. O’Neill); one (worn female) on October 27, 1998 (Alan Wormington, Joseph E. Faggan); one (worn male) on October 26, 2000 (Henrietta T. O’Neill).

Abundance:

... **Maximum Counts:** 58 (most extremely fresh) on October 11, 1998 (Alan Wormington, Henrietta T. O’Neill); 54 (extremely fresh to not fresh) on September 2, 1998 (Alan Wormington) — excluding 1998 (when more than 40 individuals were counted on six different dates), the next highest count is 41 (fresh to worn) on September 26, 1999 (Alan Wormington, Stephen T. Pike); 14 (extremely fresh to not fresh) were recorded on the extremely early date of June 8, 1999 (Alan Wormington, Henrietta T. O’Neill).

Larval Foodplants:

Several weedy grasses (Poaceae) are utilized as foodplants (*e.g.*, see Scott 1986: 433-434); of these, crab grasses (*Digitaria*), bentgrasses (*Agrostis*) and Kentucky Bluegrass (*Poa pratensis*) are found at Point Pelee (Jellicoe 1984: 5-6).

During 1998 (when the species was very common at Point Pelee) pairs were observed *in copula* and on October 11 a female was observed egg-laying on an unidentified species of grass (Poaceae) at the west side of the Tip (Alan Wormington, Henrietta T. O’Neill).

Subspecies:

Most populations are nominate *phyleus*, the subspecies that occurs over most of North America including Point Pelee.

Peck’s Skipper (*Polites peckius*)

— **Extremely Rare Immigrant and Seasonal Colonist** —
— **Former Permanent Resident (Extirpated)** —

Almost certainly the species was a permanent resident at Point Pelee until at least 1982; during

1982, for example, several individuals were recorded at both the west side of the Tip and DeLaurier Fields.

Since 1982 ... During recent years the species has been recorded irregularly at the old Camp Henry site (opposite The Dunes Picnic Area), where the species forms a seasonal population and then disappears. The species was present here in 1994 and 1996, but was not recorded in 1995 and 1997. the species temporarily colonized Camp Henry where a series of individuals (total of four) were found from August 23 to September 1 inclusive; these records indicate that a female of the first brood likely arrived earlier in the season. The following year (1995) Peck's Skipper went unrecorded at Camp Henry, but reappeared here in 1996.

Despite numerous observations of the species at Camp Henry during 1996, there were no observations whatsoever at this site in 1997. This, therefore, provides further evidence that Peck's Skipper is, at best, only a seasonal colonist at Point Pelee.

Despite its rarity inside Point Pelee National Park, the species is common (even abundant) in adjacent areas, particularly in nearby Leamington where it occurs in almost any open area; why this species is not more regular within Point Pelee National Park remains a complete mystery.

(2)	Sept. 6, 1909	Percy A. Taverner	in ???
(1)	June 8, 1918	F.M. Gaige	in UMMZ
(1)	June 8, 1982	Alan Wormington	in PPNP

Broods and Flight Period:

... **Early Date (first brood):** one (fresh) on June 7, 1982 (Alan Wormington). **Late Date (first brood):** one on June 24, 1982 (Alan Wormington). **Early Date (second brood):** two (fresh) on August 10, 1996 (Paul D. Pratt *et al.*). **Late Date (second brood):** two on September 6, 1909 (Percy A. Taverner).

Abundance:

a stray (extremely fresh female) was found at the Tip on August 11, 1988 (Alan Wormington).

Maximum Count: three (extremely fresh to not fresh) opposite The Dunes Picnic Area (old Camp Henry site) on August 23, 1994 (Alan Wormington).

Larval Foodplants:

Most authors simply state that grasses (Poaceae) are the foodplant, although Scott (1986: 444) specifically mentions Rice Cut Grass (*Leersia oryzoides*) and Kentucky Bluegrass (*Poa pratensis*); both of these species are found at Point Pelee (Jellicoe 1984: 5-6).

Subspecies:

The Peck's Skipper is monotypic with no recognized subspecies.

Tawny-edged Skipper (*Polites themistocles*)

— **Former Permanent Resident (Extirpated)** —

The Tawny-edged Skipper is common throughout southern Ontario, including most of Essex County; in recent years the species has been found regularly at Leamington, ... Why this species no longer occurs at Point Pelee is not known.

In both 1980 and 1981 — without knowing that Tawny-edged Skipper was exceedingly rare at Point Pelee — I observed this species at DeLaurier Fields; unfortunately, observation dates were not recorded and no verifying specimen was obtained.

Broods and Flight Period:

In southern Ontario there are two broods, with flight periods from early June to mid-July and early August to mid-September.

Abundance:

Curiously there is but a single known record for Point Pelee, even though historically the species could have been relatively common here; a single specimen was collected on June 6, 1918 (F.M. Gaige; specimen in UMMZ).

Larval Foodplants:

Although numerous grass (Poaceae) species might be utilized, most authors indicate that various panic grasses (*Panicum*) are the normal foodplant (*e.g.*, see Opler & Krizek 1984: 234); several species of panic grass are found at Point Pelee (Jellicoe 1984: 5).

Subspecies:

The Tawny-edged Skipper is monotypic with no recognized subspecies.

Crossline Skipper (*Polites origenes*)

— **Extremely Rare Immigrant** —
— **Former Permanent Resident (Extirpated)** —

This species was not included in my original publication of the butterflies of Point Pelee (Wormington 1983) since the single known specimen — at the time — had for decades been identified as Tawny-edged Skipper and curated under that species in the Canadian National Collection. It was not until 1996 that I had the opportunity to examine this specimen, whereupon it was realized to be, in fact, a Crossline Skipper, the first known record for Point Pelee. This episode is a classic example demonstrating the value — and importance — of critically examining all available specimens pertaining to the area under study!

The 1913 specimen I consider as representing a resident population at Point Pelee for a number

of reasons. First, the Point Pelee landscape was much more open at that time when open meadows and numerous agricultural fields were present. Second, during the same year specimens of Long Dash were also collected at Point Pelee; that species is typically found in the same habitat as Crossline Skipper. Finally the 1913 specimen pertains to the first brood of the species, and for most skippers this is the least likely brood to wander.

Broods and Flight Period:

In areas adjacent to Point Pelee (*e.g.*, Windsor) the species has two broods, but the second is partial only. Typical flight dates of the first are June 6 to July 9, while the second brood has been recorded from July 18 to October 2. The two Point Pelee occurrences pertain to the first and second broods of the species.

Abundance:

There are only two known occurrences for Point Pelee. One (extremely fresh female) collected on June 6, 1913 (C.H. Young; specimen in CNC) probably indicates that the species was formerly a permanent resident here. More recently, an obvious stray (an extremely fresh male) was encountered at West Beach on September 26, 1999 (Alan Wormington, Stephen T. Pike).

Larval Foodplants:

Suitable foodplants are undoubtedly present at Point Pelee, since most authors simply state that grasses (Poaceae) are the larval foodplant; however, Scott (1986: 446) lists only two known foodplants. Of these, only Little Bluestem (*Schizachyrium scoparium*) is found at Point Pelee (Jellicoe 1984: 5); this plant is not common here, which could be a contributing factor as to why Crossline Skipper is no longer present as a resident.

Subspecies:

... nominate *origenes*.

Long Dash (*Polites mystic*)

— **Former Permanent Resident (Extirpated)** —

widespread throughout Essex County where it can be encountered in marshy meadows and fields. The only known records for Point Pelee pertain to 1913. Over the years I have searched various areas adjacent to the Pelee Marsh that appear to be suitable for this species, but have had no success in locating this species.

Broods and Flight Period:

... the species is generally considered as single-brooded in southern Ontario, but a second (partial) brood has been recorded on a number of occasions. The first brood flies during the month of June to the middle of July; all known Point Pelee records (June 17 to July 17 inclusive) pertain to the first brood of the species.

Abundance:

No information exists to indicate the former abundance of this species at Point Pelee. However, it was probably never very numerous since suitable habitat within Point Pelee National Park was probably limited in extent. There are only three known specimens from Point Pelee, all extremely fresh females that were collected in 1913 on June 17 (Percy A. Taverner), June 21 (C.H. Young) and July 17 (Percy A. Taverner). All specimens are currently in the CNC.

Larval Foodplants:

Most authors indicate that various bluegrasses (*Poa*) are likely the only foodplants, several of which are found at Point Pelee (Jellicoe 1984: 5-6). Sedges (*Carex*) might also be utilized, since Long Dash usually occurs in wet meadows where sedges are common (e.g., see Iftner *et al.* 1992: 50-51).

Subspecies:

Nominate *mystic* is the subspecies found throughout the Great Lakes area and, formerly, at Point Pelee. However, some authors (e.g., see Layberry *et al.* 1998: 61-62) consider the species as monotypic with no recognized subspecies.

Northern Broken-Dash (*Wallengrenia egeremet*)

— Common Permanent Resident —

- | | | | |
|-----|---------------|-------------------|----------|
| (1) | July 13, 1913 | C.H. Young | - in CNC |
| (1) | July 15, 1913 | Percy A. Taverner | - in CNC |

Broods and Flight Period:

Early to late July. **Early Dates:** one on June 13, 1976 (John E. Pilkington) is an exceptionally early record; one extremely fresh male on June 22, 1991 (Alan Wormington); one extremely fresh male on June 22, 1998 (Alan Wormington, Tammy T. Dobbie). **Late Date:** one ragged male on August 14, 1989 (Alan Wormington).

Abundance:

... **Maximum Count:** 21 (fresh) on July 6, 1988 (Alan Wormington).

Larval Foodplants:

Panic grasses (*Panicum*) are cited by most authors as the larval foodplant (e.g., Opler 1992: 288-289); several species of panic grass are found at Point Pelee (Jellicoe 1984: 5).

Subspecies:

The Northern Broken-Dash is monotypic with no recognized subspecies.

Sachem (*Atalopedes campestris*)

— **Extremely Rare Immigrant and Seasonal Colonist** —

For many years the Sachem was known in Ontario solely on the basis of a single (female) specimen that was collected by Ken Thorne at London, Middlesex County, on September 21, 1968 (see Riotte 1972; 1992: 20). Subsequently there have been several incursions of the species into Essex County, during the years 1988, 1991 and 2008. Of these years, the species was found at Point Pelee in 1988 and 1991. More recently the species has been recorded in *Norfolk*, when a single individual (a fresh male) was observed at Backus' Woods on July 9, 1994 (Kevin A. McLaughlin, Robert Z. Dobos). In 1999 the species was detected on two occasions at Holiday Beach Conservation Area, *Essex*.

On June 24, 1988, James Kamstra informed me that on the previous day (June 23) he had found a Sachem at Pelee Island, an occurrence that represented, at the time, only the second known record for Ontario. Since the species is an irruptive migrant, its presence on Pelee Island suggested that it might also make an appearance at Point Pelee. So the following day, June 25, I went in search of this species; incredibly, almost immediately upon my arrival at the west side of the Tip, I found several Sachems — the first to be recorded at Point Pelee!

Broods and Flight Period:

Since the species is an immigrant, brood relationships are difficult to delineate. Initial arrivals in 1988 clearly reproduced since a subsequent brood of fresh individuals was detected 45 days later. In 1991 the situation was different, since immigrants arrived relatively late in the season, too late to successfully reproduce even if eggs had been laid. **Early Date:** seven (fairly fresh to not fresh) on June 25, 1988 (Alan Wormington *et al.*). **Late Date:** one (extremely fresh female) on October 17, 1991 (Alan Wormington).

Abundance:

Maximum Counts: ten (extremely fresh) on August 9, 1988 (Alan Wormington); nine (extremely fresh) on September 21, 1991 (Sidney M. Daniels, Robert Curry, Alan Wormington);

Larval Foodplants:

Of the known foodplants (e.g., see Scott 1986: 448), only Large Crab Grass (*Digitaria sanguinalis*), Goose Grass (*Eleusine indica*) and Red Fescue (*Festuca rubra*) are found at Point Pelee, all of which are introduced species (see Jellicoe 1984:5). At the west side of the Tip on June 25, 1988, a female Sachem was observed ovipositing on Large Crab Grass (Alan Wormington).

Subspecies:

North American populations are nominate *campestris*, the subspecies occurring at Point Pelee. Populations in eastern North America have in the past been designated as subspecies *huron* by many authors, but more recently Layberry *et al.* (1998: 65) state that they are not sufficiently distinct to warrant subspecific recognition. This is probably a valid argument since highly migratory species tend to be monotypic.

Hobomok Skipper (*Poanes hobomok*)

— **Uncommon Permanent Resident** —

For a period of several years there were very few records at Point Pelee — for example, there were no reported observations whatsoever in 1985, 1987, 1990 and 1991 (and only a single individual in 2000). For a while it appeared that the species was increasing in abundance, but almost immediately it disappeared completely. The elusive nature of this species at Point Pelee continues to be a puzzle. However, it does continue to be a relatively scarce species.

This forest species generally avoids open areas; instead, it is more likely to be found at sunlit clearings or along various trails and roadways that pass through wooded areas. At Point Pelee it has been found from the Tip area to as far north as the old Camp Henry site opposite The Dunes Picnic Area.

The dark female form (*pocahontas*) — which is rare to uncommon in southern Ontario (including the Windsor area) — has not been recorded at Point Pelee. This probably indicates that dark individuals can only be produced from a dark adult.

Broods and Flight Period:

The single brood has a comparatively short flight period, extending from late May to late June.

Early Date: one (extremely fresh male) on May 14, 1998 (William G. Lamond, Alan Wormington) — immediately following this early record there were multiple observations; excluding 1998 (a very early year) the next earliest record is of one on May 21, 1999 (Robert J. Yukich, Michael H. King). **Late Date:** one (not fresh to ragged) on July 1-4, 1996 (Alan Wormington).

Abundance:

Although the Hobomok Skipper is likely to be found often during its flight season, usually

solitary individuals only are encountered; therefore, it is unusual to locate more than two or three per day. **Maximum Counts:** 11 (fresh to worn) on June 1, 1998 (Alan Wormington, Henrietta T. O'Neill); eight (fresh) on May 31, 1969 (Alan Wormington); three (extremely fresh) were found on the early date of May 21, 1998 (Alan Wormington).

Larval Foodplants:

Panic grasses (*Panicum*) and bluegrasses (*Poa*) are often cited as known foodplants (*e.g.*, see Scott 1986: 453); numerous species within these two groups are present at Point Pelee (Jellicoe 1984: 5-6). On June 1, 1998, a female was observed egg-laying on an unidentified species of grass (Poaceae) at White Pine Beach (Alan Wormington).

Subspecies:

Nominate *hobomok* is the subspecies found at Point Pelee and throughout eastern North America.

Broad-winged Skipper (*Poanes viator*)

— Rare Permanent Resident —

The Broad-winged Skipper is a recent arrival to Point Pelee, but is now a permanent resident.

Introduction At Springarden Prairie, Windsor the species has been encountered on only two occasions: July 10, 1990 (Kirk W. Zufelt) and July 22, 1996 (Alan Wormington).

Formerly Broad-winged Skipper was very rare in Essex County. The first known record apparently pertains to 1984, when it was found at Gesto by Tom T. Ikeda (Hess 1985). The species was not reported again until 1990, when found at Windsor's Ojibway Prairie by Kirk W. Zufelt (Hess 1991). But during the last couple of decades the species has colonized much of Essex County, in concert with the simultaneous spread of "Eurasian" Common Reed (*Phragmites australis australis*). This invasive plant is now found everywhere in Essex County, including roadside ditches. Bad for wetlands, but good for Broad-winged Skipper!

Close to Point Pelee, in 1997 a colony of Broad-winged Skipper was found on August 9 at one of the quarry ponds northwest of Leamington (Jeffrey L. Larson). The first record for Hillman Marsh was in 2005, when AW found the first of several starting on August 2. In 2007, on August 10, the species was found for the first time at Wheatley Provincial Park, which is in *Chatham-Kent* (Jerry S. Ball, Anthony C.T. Bigg). Based on these nearby records it was easy to predict that the species would eventually be found at Point Pelee.

In 1997 a small colony of this species was discovered in an old quarry complex just west of Leamington (Jeffrey L. Larson *et al.*). It is interesting that the species appears in this area, only about 10 km northwest of the entrance to Point Pelee. One wonders why, at that time, the species was not present in the Pelee Marsh, or even Hillman Marsh.

A history of Broad-winged Skipper in Essex County, including the discovery of this species at Point Pelee National Park for the first time, was described by Wormington (2008).

Broods and Flight Period:

One brood, flying from late June to early August

Larval Foodplants: AW believes that it is *Phragmites australis*. I think that he is wrong, the foodplant, there and around Ottawa, is *Carex lacustris*

Maximum Counts: three (extremely fresh) on July 15, 2008 (Alan Wormington).

Subspecies: Only the nominate subspecies occurs in Ontario.

Dion Skipper (*Euphyes dion*)

— Uncommon Permanent Resident —

in its preferred habitat, the species will often be found with the similar Dukes' Skipper one on July 13, 1913 (Percy A. Taverner; specimen in CNC)

Broods and Flight Period:

... **Early Dates:** one (extremely fresh male) on June 22, 1991 (Alan Wormington); one (extremely fresh male) on June 28, 1998 (Alan Wormington). **Late Dates:** one (worn female) on August 13, 1988 (Alan Wormington, William G. Lamond, Kevin A. McLaughlin, Jeffrey L. Larson); one on August 5, 2000 (Barbara N. Charlton).

Abundance:

... **Maximum Counts:** 15 (fresh) on July 6, 1988 (Alan Wormington); eight (extremely fresh) on July 11, 1995 (Alan Wormington).

Larval Foodplants:

Only a few sedges (Cyperaceae) are known foodplants according to Scott (1986: 455); of these, only Lake Sedge (*Carex lacustris*) and Tussock Sedge (*Carex stricta*) are found at Point Pelee (Jellicoe 1984: 6).

At Point Pelee, the few known sites where Dion Skipper has been found are all areas of the Pelee Marsh edge where Lake Sedge is present in abundance. On two separate occasions, individual (not fresh) females were observed egg-laying on this larval foodplant (Alan Wormington) — on July 25, 1982 (northeast of DeLaurier Trail) and July 19, 1995 (east section of Shuster Trail).

Subspecies:

Dion Skipper is monotypic with no recognized subspecies.

Dukes' Skipper (*Euphyes dukesi*)

— Uncommon Permanent Resident —

From a North American perspective, the Dukes' Skipper is probably the rarest species found at Point Pelee, see Mather (1963) and Irwin (1972). Since that time the species have been found at more locations, but its range is still generally restricted to just three main areas in North America including the western end of Lake Erie. Even though the species is now known from numerous localities throughout Essex County, a few sites in extreme west Kent County, and two locations in Lambton County, Dukes' Skipper was not discovered in Ontario until 1968 when Anthony M. Holmes found it at McGregor, Essex County, on July 11 (Riotte 1972, 1992: 22).

The first Point Pelee record pertains to a specimen (a fresh male) that was collected at The Dunes Beach, a very dry site, on July 1, 1973 (John E. Pilkington; specimen in PPNP); this individual had undoubtedly wandered from the edge of Pelee Marsh, presumably in search of flowers.

Today the species can be encountered at or near the edge of Pelee Marsh from DeLaurier Trail to the southeast section of the Woodland Nature Trail, most often in the vicinity of its larval foodplant. From this core breeding area, wandering individuals (in search of flowers) have been found at a number of sites including The Dunes Beach (as detailed above), DeLaurier Fields, Ander's Field, NW Woodland Nature Trail, Sparrow Field, West Beach, and the west side of the Tip.

At Point Pelee the easiest place to observe this species is along the east section of Shuster Trail, just before reaching East Beach.

Broods and Flight Period:

Only a single brood is typical at our latitude, with a flight period extending from early July (some years not until the middle of July) to the middle of August. In 1991, an extremely early year, a second (partial) brood was recorded for the first time; at the Sparrow Field there was a fresh male on September 7 (Robert Curry, Kirk W. Zufelt), followed by a different fresh male on September 8 (Alan Wormington). Curiously the second brood has not been reported in either Michigan (Nielsen 1999: 227-228) nor Ohio (Iftner *et al.* 1992: 58-59), but it has been reported in Kentucky. ***Early Dates:*** two (extremely fresh males) on June 22, 1991 (Jeffrey L. Larson, Alan Wormington); one (extremely fresh male) on June 27, 2000 (Alan Wormington). ***Late Dates (first brood):*** one (fresh female) on September 6, 1992 (Robert Z. Dobos, Barbara N. Charlton, Paul A. Rose); excluding this record (the season was extremely late in 1992) the next latest record is of one (worn female) on August 25, 1996 (Alan Wormington). — should probably somewhat

condense this record and just present it in a normal fashion.

Abundance:

Typically five or more individuals can be encountered per day if the preferred habitat of the species is investigated. **Maximum Count:** 14 (extremely fresh to worn males) on July 23, 1995 (Alan Wormington).

Larval Foodplants:

Only three sedge (*Carex*) species are known foodplants of Dukes' Skipper according to Scott (1986: 457); of these, only *Carex lacustris* and *Carex hyalinolepis* are found in Essex County (Botham 1981: 34), and only *lacustris* (Lake Sedge) is found at Point Pelee (Jellicoe 1984: 6). At Point Pelee, colonies of Dukes' Skipper are always found in areas where Lake Sedge is present.

Subspecies:

Formerly Dukes' Skipper was considered monotypic with no recognized subspecies, but more recently (1996) those in peninsular Florida are considered distinct from other populations. Excluding Florida, populations elsewhere (including Ontario) are referable to nominate *dukesi*.

Dun Skipper (*Euphyes vestris*)

— Common Permanent Resident —

The abundance of this species has clearly increased in recent years. For example, up to 1988 inclusive I considered the species to be an uncommon resident (Wormington 1989: 5); today, however, it can be classified as common. This change in status can perhaps be attributed to the increase of flowering plants that are now found along the west beaches, particularly from the Tip to White Pine Picnic Area.

Broods and Flight Period:

The species is single brooded. In 1991 the species emerged extremely early, which gave rise to an emergence of a second (partial) brood for the first time; the few recorded observations extended from one (extremely fresh male) on September 7 (Robert Curry, Kirk W. Zufelt, Alan Wormington) to three (fresh) on September 22 (Kirk W. Zufelt, Alan Wormington). **Early Dates:** five (four extremely fresh males plus one ragged male) on June 22, 1991 (Alan Wormington); one (extremely fresh male) on June 23-24, 1998 (Alan Wormington). **Late Dates (first brood):** one (worn female) on August 23, 1992 (Alan Wormington); one (worn) on August 19, 1997 (Alan

Wormington).

Abundance:

... **Maximum Counts:** 45 (fresh) on July 18, 1992 (Alan Wormington, Tim Sabo, Robert Curry, William G. Lamond, Kevin A. McLaughlin); 15 (fresh males) were counted on the very early date of June 23, 1991 (Alan Wormington).

Larval Foodplants:

Various sedges (Cyperaceae) are used as foodplants; the utilization of grasses (Poaceae) is considered doubtful by most authors (*e.g.*, see Scott 1986: 456-457). Since the Dun Skipper is associated somewhat with woodland habitats, sedge species characteristic of such environs may be utilized more frequently than others.

Subspecies:

Populations of the Great Lakes area, including Point Pelee, are referable to subspecies *metacomet*.

Brazilian Skipper (*Calpodés ethlius*)

— Extremely Rare Immigrant —

The 1991 occurrence of this species — the first record for Ontario and Canada — was certainly one of the most unexpected butterflies ever to be found at Point Pelee. The Brazilian Skipper is a tropical species that normally is not a permanent resident north of either Florida or Texas.

The Brazilian Skipper was part of a major influx of southern species that also included numbers of Ocola Skipper, another new species for Point Pelee; a summary of this significant event was published in detail by Sidney M. Daniels (1992).

Henrietta O'Neill's 2007 records were along Concession Road D, in association with planted Cannas.

Broods and Flight Period:

In the deep south (*e.g.*, Florida and south Texas) this species is active during most of the year where it produces multiple broods. It is unlikely that the Point Pelee Brazilian Skipper arrived here directly from the southern United States; instead, it was probably part of a brood that was produced somewhere in transit.

Abundance:

The single Point Pelee individual (a fresh male) was found at the west side of the Tip on September 21, 1991 (Sidney M. Daniels, Robert Curry, Alan Wormington; specimen in ONHP);

a detailed account of this occurrence was published by the author (Wormington 1992a).

Larval Foodplants:

Primary foodplants in North America are exotic Cannas (Cannaceae) as stated by Opler & Krizek (1984: 261-262). The Brazilian Skipper is capable of advancing north from the Gulf Coast each season due to the planting of cannas in gardens and city parks, etc.; according to Scott (1986: 466), green-leaved, red-flowered cannas are preferred over other varieties. Cannas are planted often throughout southern Ontario, but none are present within Point Pelee National Park.

Subspecies:

Despite being found throughout most of the New World tropics, the Brazilian Skipper is monotypic with no recognized subspecies.

Ocola Skipper (*Panoquina ocola*)

— **Extremely Rare Immigrant** —

Several records in both Indiana (Shull 1987: 74-75) and Ohio (Iftner *et al.* 1992: 65-66). Despite a long history of butterfly study in Michigan, to date the species remains unrecorded in that state (Nielsen 1999).

Broods and Flight Period:

Point Pelee records span the period of September 19 to October 16 inclusive.

Abundance:

This species has been found at Point Pelee in 1991, 1995, 1998, 2006 and 2008; multiple individuals were recorded during all of these years, with the exception of 2006 when only one was found. When encountered almost all individuals were found nectaring on the flowers of Spotted Knapweed (*Centaurea maculosa*).

In 1991, on September 21, a total of four individuals (ranging in condition from fairly fresh to worn) were found in the area of the Tip, including the Sparrow Field (Sidney M. Daniels, Robert Curry, Alan Wormington). An account of this event (which also includes the details of the occurrence at Hamilton) was presented in detail by Curry (1992).

In 1995 the species was again recorded at Point Pelee, and again in the Tip area including the Sparrow Field; observations included one (fairly fresh) on September 19 (Alan Wormington), two (fresh) on September 24 (Alan Wormington, Tim Sabo), one (not fresh) on September 26 (Alan Wormington) and one (fresh) on October 13 (Alan Wormington).

In 1998 a series of observations included two (not fresh) on October 1 (Alan Wormington), one (not fresh) on October 12 (Robert J. Yukich, Karen R. Yukich), and one (fairly fresh) on the record-late date of October 16 (Michael H. King, Robert J. Yukich); all of these individuals were found in an area from West Beach to the west side of the Tip

In 2006, one extremely fresh individual was found on September 27 at the west side of Tip (Alan Wormington); as with previous records of the species at Point Pelee, this one too was nectaring on Spotted Knapweed.

Larval Foodplants:

Several grasses (Poaceae) are cited by Scott (1986: 467) as known foodplants, none of which occur within our region. Perhaps other grass species are utilized as foodplants north of the normal range of Ocola Skipper; however, successful reproduction at Point Pelee is probably not possible due to the fact that individuals thus far have arrived relatively late in the season.

Subspecies:

There are no recognized subspecies of Ocola Skipper.

Pipevine Swallowtail (<i>Battus philenor</i>)
--

— Rare Immigrant —

... There are many historical accounts of substantial flights of this species into Ontario. The species undoubtedly occurred at Point Pelee during these times, but there is no record of its occurrence until 1981; in that year there were at least four records, from mid-June to late September.

Perhaps the presence of other dark swallowtails at Point Pelee resulted in the species being overlooked on a consistent basis.

Curiously, up to 1998 the earliest recorded date was June 16, 1981.

Individuals recorded very late in the season (*e.g.*, in late September and early October) have all been in immaculate condition; this indicates that they were probably raised somewhere relatively close to Point Pelee, presumably from sites with ornamental Dutchman's Pipe, the only available foodplant north of the species normal range.

Since the first brood of Pipevine Swallowtail is largely if not entirely sedentary, the very early occurrences at Point Pelee (as early as April 23) indicate that these second-brood individuals have originated from well to the south of Ontario, possibly as far south as the southern United States. In more northern areas the second brood would not be on the wing until the middle of June — and most years this is precisely the time when the species first appears at Point Pelee.

Broods and Flight Period:

The first (early spring) brood is not migratory; therefore, those individuals appearing at Point Pelee are representatives of later (second and subsequent) broods. Dates of occurrence span the period of June 16 to July 27 (second brood) and September 13 to October 1 (third brood). ***Early Dates:*** one (fresh) on April 23, 2001 (Alan Wormington); one on May 6, 1999 (Robert W. Stamp, Richard

G. Snider); one on May 8, 2000 (Jerry S. Ball) — during all of these years, there were subsequent observations following each of these early records. **Late Dates:** one on October 3, 2001 (AW et al), one (extremely fresh male) on October 1, 1986 (Alan Wormington); one (extremely fresh) on September 29, 1988 (Kevin A. McLaughlin).

Abundance:

Although single individuals are to be expected, on several occasions the species has been much in evidence; at such times substantial numbers (five to ten) can be found per day. **Maximum**

Counts: 15-20 (fresh to not fresh) on June 16, 1981 (Alan Wormington); 16 (extremely fresh) on July 6, 1999 (Alan Wormington); 15 (fresh) on May 8, 1999 (numerous observers); 12 (not fresh to worn) on July 21, 1985 (Alan Wormington).

Larval Foodplants:

None of the known foodplants are found at Point Pelee, thus reproduction here is not possible. South of our area (where Pipevine Swallowtail is a permanent resident), larval foodplants are various pipevines (Aristolochiaceae). In more northern areas — including southern Ontario — Dutchman’s Pipe (*Aristolochia durior*) is often planted as an ornamental vine; such plantings occasionally attract wandering females and seasonal “colonies” are thus created. However, such temporary populations apparently never survive the winter.

Subspecies:

The subspecies occurring at Point Pelee is nominate *philenor*, which is found throughout eastern North America.

Zebra Swallowtail (*Eurytides marcellus*)

— **Extremely Rare Immigrant** —

The Zebra Swallowtail is not a permanent resident in Ontario, but is categorized as such in some U.S. states that are adjacent to the province. In Michigan the species is present in the southmost tier of counties (Nielsen 1999: 38-39), while in Ohio it is resident throughout the state but colonies northward are very local (Iftner *et al.* 1992: 67). The first brood of the species is sedentary (non-migratory), and in these states Zebra Swallowtail has been recorded as early as April 2 (Ohio) and April 17 (Michigan).

In Ontario the majority of Zebra Swallowtail occurrences pertain mostly to the second brood of the species, when immigrants have entered the province irregularly over the decades from the middle of June to the middle of July; such immigrants have been recorded as far north as Zurich (Huron County) and Port Hope (Northumberland County). The source of Ontario immigrants is not known, but they probably originate from well to the south of the province where the species is common to abundant. Significant incursions into Ontario are on record for the years 1896, 1913,

1965 and 2000.

In southern Ontario it is possible for temporary colonies of Zebra Swallowtail to develop whenever its larval foodplant (Common Pawpaw) is encountered; native stands of Pawpaw are present along the north shore of Lake Erie from Essex County to the Niagara Peninsula, north to extreme southern Lake Huron (Soper & Heimburger 1982: 123-124). Despite the distribution of its larval foodplant in southern Ontario, the colonization of Zebra Swallowtail in the province has been detected only in Essex County and, recently (2000), in Norfolk County.

In Essex County there are several recorded instances of temporary colonization. The most interesting account is that of W.W. Newcomb (in Gibson 1910a), who counted 15 eggs, 64 larvae and chrysalids, and seven adult Zebra Swallowtails at a Pawpaw stand in Windsor on August 18, 1904. On June 11, 1929, a Zebra Swallowtail of the spring phenotype (form *marcellus*) was collected by Lorus J. Milne at Leamington (specimen in CNC), where at least historically pawpaw was known to be present. And finally, a small colony of Zebra Swallowtail persisted from 1987 to 1989 inclusive (and possibly earlier) in a woodlot at Harrow (Campbell *et al.* 1990), where a large stand of Pawpaw is still present. A single individual observed at the same location on June 8, 1992 (Stephen T. Pike), may have been the result of a subsequent incursion of Zebra Swallowtail into southern Ontario.

At Point Pelee the Zebra Swallowtail was first recorded in 1882, when William W. Saunders and his botany friends observed one or two individuals on June 29 (Saunders 1885). In 1913, Percy A. Taverner and others were at Point Pelee from May 15 to July 24 inclusive; he stated that pawpaw was not present here, yet the group observed Zebra Swallowtails “nearly every day and often from two to six” (Taverner 1914). George M. Stirrett (1970: 153) stated that Zebra Swallowtail was “... a more or less common species at Point Pelee.” One must assume that he was referring to historical accounts, however, since by the 1960s the species was definitely very rare at Point Pelee and throughout southern Ontario. In fact, after 1913 the Zebra Swallowtail was recorded at Point Pelee on just two occasions by the time Stirrett made that statement, involving single individuals only in 1931 and 1965.

In 2000 a major incursion of Zebra Swallowtail occurred at Point Pelee involving numbers not recorded here since 1913; this event was described in detail by Henrietta T. O’Neill (2001a). Observations spanned the dates of only June 13-28 inclusive, yet during this period there were up to 11 individual sightings per day. Based on these observations, it was estimated that at least 12 to 20 individuals were involved. Although Zebra Swallowtails must have occurred over a wide area of southern Ontario during 2000, elsewhere they were detected only at Pelee Island (one on August 22) and at Lynedoch in Norfolk County. At the Lynedoch site, a tiny colony developed there in a residential garden where pawpaw had been planted; adult Zebra Swallowtails were recorded from June 19 to August 14 inclusive, and up to two dozen larvae were also noted (Jody Bodnar *et al.*).

All known Point Pelee records (excluding 2000):

1882: June 29	(2)	William W. Saunders <i>et al.</i>	sight
1909: September 6	(1) worn	Percy A. Taverner	in ???
1913: see Taverner (1914) as described above			
1913: July 5	(1) fresh	C.H. Young	in CNC
1931: July 8	(1) fresh	G. Stuart Walley	in CNC
1965: June 29	(1)	Jules C.E. Riotte	sight record
1978: July 18	(1) ex fresh	Wendy A. Attwater (Attwater?)	in GUE

1988: June 18	(1) fresh	Jay Cossey	sight record
- presumably same individual then seen later on July 1 (when ragged)			Joanne C. Barten, Paul D. Pratt
1998: June 25	(1)	Henrietta T. O'Neill	sight record
2000 — invasion year			
2008: July 1	(1)	David A. Martin, Linda Wladarski <i>et al.</i>	sight record
2012: June 10	(1) fresh	Blake A. Mann	photo record

Miscellaneous Records (Essex County):

1931: xxxx	(1)	xxxxxx	Pelee Island (CNC)
18??	(1)	F.C. Lowe	North Ridge (= Windsor?)
1898: August 10	(1)	Wm. Brodie (collector?)	Kingsville (ROM)
1904: August 18	(lots)	W.W. Newcomb	Windsor (sight)
- 15 eggs, 64 larvae + chrysalids, and seven adults around a patch of Pawpaw			
1929: June 11	(1)	Lorus J. Milne	Leamington (CNC)
- this is a spring-form individual, indicating local reproduction			
1978: July 2	(1)	Mark Gawn	Leamington (sight)
1993: July 4	(1)	Gary R. Tetzlaf	Belle Point (sight)
- observed from a Jet-Ski, as it flew over Lake Erie!			
2000: August 22	(1)	AW, HTO	Pelee Island (in AW)

Broods and Flight Period:

Within the core range of Zebra Swallowtail there are probably three broods, but the spring brood is apparently non-migratory and has never been found at Point Pelee. In Ohio (Iftner *et al.* 1992: 67), flight dates are listed as April-May (first brood), June-July (second brood) and August (third brood). Point Pelee records extend from June 10 to July 8 (second brood), plus single occurrences on July 18, August 5 and September 6 (third brood). ***Early Dates (second brood):*** one (fresh) on June 10, 2012 (Blake A. Mann); one (fresh) on June 13, 2000 (Henrietta T. O'Neill); one (fresh) on June 18, 1988 (Jay Cossey) — what was presumed to be the same individual was then seen at the same location on July 1, when it was described as being in ragged condition (Joanne C. Barten, Paul D. Pratt). ***Late Dates (second brood):*** one (fresh) on July 8, 1931 (G. Stuart Walley); one (fresh) on July 5, 1913 (C.H. Young). ***Early Date (third brood):*** one (extremely fresh) on July 18, 1978 (Wendy A. Attwatter). ***Late Date (third brood):*** one (worn) on September 6, 1909 (Percy A. Taverner).

Abundance:

Only single individuals are usually encountered at Point Pelee, except during incursion years (such as 1913 and 2000) when several might be found in a single day. The first brood of Zebra Swallowtail — unrecorded at Point Pelee — is the most numerous; second and third generations are progressively less numerous. ***Maximum Counts:*** seven (fresh) on June 19, 2000 (Henrietta T. O'Neill, Fred J. Urie); “two to six per day” on unspecified dates during the summer of 1913 (in Taverner 1914).

Larval Foodplants:

In the northern part of the range of Zebra Swallowtail, Common Pawpaw (*Asimina triloba*) is the sole larval foodplant (Opler & Krizek 1984: 43-44).

The status of Common Pawpaw at Point Pelee was recently reviewed by the author (see Wormington 2001c). There is no confirmed record of Pawpaw occurring naturally within Point

Pelee National Park, even though a published account on the distribution of this species in southern Ontario included a sight record for Point Pelee (Bowden & Miller 1951). The inclusion of this report was based on a statement made by John Macoun (in Macoun 1883: 28-29) that Pawpaw was “very abundant on Point Pelee and in the townships bordering Lake Erie, between that point and Amherstburg.” Macoun’s identification is certainly not in doubt, but his reference to “Point Pelee” may have referred to the base of the Point Pelee peninsula — where pawpaw is known to have been present — rather than the area that is now Point Pelee National Park. Supporting this viewpoint, some decades later Percy A. Taverner clearly stated “... it [Common Pawpaw] does not occur on the Point and the nearest clump of it is more than six miles away across a wide marsh” (in Taverner 1914).

Despite the foregoing comments, an introduced stand of Pawpaw currently exists within Point Pelee National Park (Jellicoe 1984: 20); this stand is located just south of the Woodland Nature Trail where it was planted in 1956 (see Battin 1975). Later in 2000, after the incursion of adult Zebra Swallowtails had run its course, this pawpaw stand was systematically examined for the presence of larvae or other evidence of breeding, but nothing was found. Although it is unlikely that Zebra Swallowtail reproduced at Point Pelee during historical times, the potential does exist for a temporary colony to develop here if an immigrant female were to discover the introduced stand of pawpaw that is still present.

Subspecies:

The Zebra Swallowtail is monotypic, with no recognized subspecies.

Black Swallowtail (*Papilio polyxenes*)

— **Uncommon Permanent Resident** —

Broods and Flight Period:

Unlike the other swallowtails that are resident at Point Pelee, the delineation between broods is not obvious, adults being seen from the middle of May to early September. ***Early Date:*** two (fresh) on April 17, 1976 (John E. Pilkington, Alan Wormington) — these extremely early individuals were recorded during a prolonged heat wave; one on April 27, 1999 (Henrietta T. O’Neill). ***Late Dates:*** one (not fresh) on September 26, 1982 (Alan Wormington); one on September 25, 1988 (Johanne Ranger).

Abundance:

... ***Maximum Counts:*** 40 on August 7, 1999 (4th Annual Butterfly Count); 30 (fresh to worn) at the North Dike on June 23, 1982 (Alan Wormington).

Larval Foodplants:

Numerous plants in the carrot (Apiaceae) family are fed upon, including both native and cultivated species (*e.g.*, see Scott 1986: 171-174). Despite the availability of a few native species at Point Pelee (*e.g.*, see Jellicoe 1984: 15), throughout southern Ontario the most frequently used larval foodplant is Queen Ann's Lace (*Daucus carota*).

Subspecies:

The subspecies found at Point Pelee, and throughout eastern North America, is *asterius*.

Giant Swallowtail (*Papilio cresphontes*)

— **Common Permanent Resident** —

First reported at Point Pelee on June 29, 1882, by William W. Saunders *et al.* (Saunders 1885). Percy A. Taverner found the species common in September of 1907. The large permanent population at Point Pelee is a local phenomenon, supported entirely by the abundance of Common Hop-Tree here, a favoured larval foodplant; elsewhere in Essex County, for the same reason, the species is also relatively common. However, in the Great Lakes Region as a whole, Giant Swallowtail is not a common species. George M. Stirrett (1970: 150-152) was under the false impression that Giant Swallowtail was incapable of over-wintering in southern Ontario, suggesting that adults seen early in the season were immigrants from the south. This idea can be quickly dispelled, however, since at Point Pelee the first individuals of the season are always in immaculate condition. see Taverner (1908).

Broods and Flight Period:

There are two broods with a partial third brood during most years; during cool springs when the first brood is late to emerge, a third brood usually does not materialize. Typical flight dates during most years are late May to early July (first brood) and late July to early September (second brood); the partial third brood — if it appears — can be expected from early to late September. During any one season there is always a distinct gap between the last (worn) individuals of the first brood and the first (fresh) individuals of the second, usually of two or three weeks' duration; however, dates overlap considerably when observations for all years are combined together.

Early Dates (first brood): one (fresh) on May 6, 2012 (Alan Wormington); one (fresh) on May 8, 1990 (Ellen A. Smout); two (fresh) on May 9, 1985 (Tim Smart). ***Late Dates (first brood):*** one (small and ragged) on July 3, 2013 (Alan Wormington). ***Early Dates (second brood):*** one (extremely fresh) on July 4, 2012 (Alan Wormington); two (extremely fresh) on July 8, 1998

(Henrietta T. O'Neill, Alan Wormington). **Late Dates (all broods):** two (ragged) on October 16, 2010 (Alan Wormington, Stephen T. Pike); one (fresh) on October 11, 1995 (B. Michael Chomyshyn, D. Keith Sealy, Leola Sealy *et al.*

Abundance:

Although the first brood is fairly common, considerably more individuals can be observed during the second flight of the species. Third brood individuals are generally few in number.

Maximum Counts: 172 on August 8, 1997 (Robert L. Bowles *et al.*), 120 on August 12, 2000. The high count for the third brood is 12 (fresh) on October 1, 1988 (Alan Wormington), an exceptional number for the late date.

Larval Foodplants:

Numerous species of rue (Rutaceae) are utilized, including citrus trees in the southern United States (Scott 1986: 176-177). At Point Pelee, extensive stands of Common Hop-Tree (*Ptelea trifoliata*) support the large population of Giant Swallowtail for which the park is famous. Northern Prickly-Ash (*Zanthoxylum americanum*) is the only other foodplant that is present and is probably used on a regular basis; populations elsewhere in southern Ontario (away from Essex County) are almost entirely dependant on this shrub.

Subspecies:

Despite its very wide range — occurring south to include most of South America — the Giant Swallowtail is monotypic with no recognized subspecies. A few authors, however, have designated northern populations (including Point Pelee) as subspecies *pennsylvanicus*; at most this is a weakly-differentiated subspecies, and a majority of authors do not consider it as valid.

Eastern Tiger-Swallowtail (*Papilio glaucus*)

— Common Permanent Resident —

.... At Point Pelee this species is always less numerous than Giant Swallowtail, even though both species are considered common. The Tiger Swallowtail can be found throughout Point Pelee but is most easily observed when it is visiting flowers or damp soil.

Dark “melanic” females (form *nigra* of subspecies *glaucus*) occur with increasing frequency to the south of Ontario. Previously this form was considered rare but regular at Point Pelee (Wormington 1983: 10), but today dark females are encountered as frequently as yellow females or possibly even moreso. It appears that there has been an actual increase of dark females during recent years, rather than the possibility that they were previously overlooked. Scott (1986: 179-182) has stated that dark females are produced only by a dark parent, which suggests that this form

is becoming more dominant in our population. Recorded dates for *nigra* females span the period of June 1 to September 1 inclusive, plus a late individual on September 28.

Despite its fast flight and wary nature, the Tiger Swallowtail does have its predators; for example, on May 19, 1991, an extremely fresh male was captured and swallowed whole — wings and all — by an Eastern Wood-Pewee (Alan Wormington *et al.*).

Broods and Flight Period:

There are two broods; a few late occurrences may indicate that during some years there may be a partial third brood. The species is on the wing throughout the season (there is apparent overlap of the first and second broods) from early May to late August. ***Early Dates:*** two (extremely fresh) on April 18, 1976 (John E. Pilkington, Alan Wormington); one (extremely fresh) on April 21, 1998 (Henrietta T. O'Neill); one (extremely fresh) on April 24, 2007 (J. Michael Tate). ***Late Dates:*** one (fairly fresh) on October 11, 1982 (Paul D. Pratt); one (worn *nigra* female) on September 28, 1991 (Alan Wormington).

Abundance:

... ***Maximum Counts:*** 20 on August 7, 1999 (4th Annual Butterfly Count); 19 (fresh) on June 16, 1994 (Alan Wormington); 18 (fresh) on July 21, 1991 (Alan Wormington, James N. Flynn).

Larval Foodplants:

A wide variety of plants are used, including cherries (*Prunus*), hawthorns (*Crataegus*), ashes (*Fraxinus*), Common Hop-Tree (*Ptelea trifoliata*), Sassafras (*Sassafras albidum*), Spicebush (*Lindera benzoin*), American Basswood (*Tilia americana*), Tulip Tree (*Liriodendron tulipifera*) and Common Lilac (*Syringa vulgaris*), amongst others (Scott 1986: 179-182). All of these plants (in addition to others) are probably used at Point Pelee, although Common Hop-Tree is probably utilized more frequently than all others.

At Point Pelee this species has been observed to oviposit on Common Hop-Tree, Choke Cherry (*Prunus virginiana*) and an unidentified species of ash.

Subspecies:

Nominate *glaucus* is the subspecies found at Point Pelee and throughout eastern North America (excluding the extreme southeast United States).

Spicebush Swallowtail (*Papilio troilus*)

— Common Permanent Resident —

First reported at Point Pelee by William W. Saunders on June 30, 1882 (Saunders 1885). see

Taverner (1908)

Broods and Flight Period:

There are three broods, although the third brood may be partial only; middle of May to late September. **Early Dates:** one (extremely fresh) on April 17, 1976 (Alan Wormington) — this exceptionally early emergence was due to warm temperatures that prevailed for several days; the next earliest date is May 7, recorded in three different years (1990, 1999 and 2000). **Late Dates:** one (not fresh male) on October 24, 2010 (Alan Wormington); two (not fresh) on October 13, 1995 (Alan Wormington, Martin Blagdurn); one (fresh) on October 7, 1986 (Jeffrey L. Larson, G. Tom Hince).

Abundance:

... **Maximum Counts:** 72 on August 7, 1999 (4th Annual Butterfly Count); 49 (fresh to worn) on September 7, 2010 (Henrietta T. O'Neill, Alan Wormington); 27 on August 10, 1996 (1st Annual Butterfly Count).

Larval Foodplants:

Scott (1986: 183) indicates that various plants in the Laurel (Lauraceae) and Magnolia (Magnoliaceae) families are utilized, with Sassafras (*Sassafras albidum*) and Spicebush (*Lindera benzoin*) the preferred hosts; both of these species are common at Point Pelee.

Subspecies:

Nominate *troilus* is the subspecies found at Point Pelee and throughout the range in Ontario.

Common Checkered-White (*Pontia protodice*)

— Extremely Rare Immigrant —

The first brood of the species is probably entirely or mostly sedentary and has not been recorded at Point Pelee, nor anywhere in Essex County. In Michigan the earliest noted date is April 16 (Nielsen 1999: 40-41). Thus records at Point Pelee are derived from the second and later broods.

(1)	July 9, 1931	G. Stuart Walley	in CNC
(1) fresh	Sept. 21, 1953	D. Monty Wood	in CNC
(1)_	Sept. 25, 1954	P.D. Syme	in PDS

Broods and Flight Period:

Abundance: one on July 9, 1931 (G. Stuart Walley; specimen in CNC).

Larval Foodplants:

There is no evidence that Common Checkered-White has ever reproduced at Point Pelee, but it potentially does so as numerous foodplants are present; these include members of the mustard (Cruciferae) family. Numerous mustards listed as foodplants by Scott (1986: 220-222) are present at Point Pelee (Jellicoe 1984: 11-12).

Subspecies: The Common Checkered-White is monotypic with no recognized subspecies.

Cabbage White (*Pieris rapae*)

— Abundant Permanent Resident —

Saunders (1885) did not record this species during his visit to Point Pelee on June 29-30, 1882; this perhaps suggests that Cabbage White was either absent or not well established here at that time. The first reference to the species at Point Pelee is by Percy A. Taverner, who stated that it was common on August 14, 1909.

Broods and Flight Period:

... curiously, elsewhere in Essex County and southern Ontario the Cabbage White is often recorded into November; at Point Pelee, however, the species has been recorded into November only in 1983 (a single observation) and 1990 (several observations). **Early Dates:** one (extremely fresh) on March 23, 1994 (Joseph E. Faggan); one on April 6, 2000 (Ashley Moffatt). **Late Dates:** one on November 15, 1990 (William H. Foott, Lorraine H. Foott); one on November 6, 1983 (John E. Pilkington).

Abundance:

although the spring brood is common, it is present in greatly reduced numbers compared to later generations; however, 10 to 20 individuals per day can still be expected. With the emergence of subsequent broods the species becomes increasingly more abundant; by late summer it is not unusual to encounter dozens if not hundreds on a daily basis. **Maximum Counts:** 6000 (mostly fresh) were estimated to be present in just the area of the west side of the Tip on August 13, 1988 (Alan Wormington, William G. Lamond, Jeffrey L. Larson, Kevin A. McLaughlin); 3000 (fresh to worn) on September 20, 1992 (Alan Wormington, Kirk W. Zufelt); 1800 (fresh) on September 7, 2008 (Alan Wormington); 500 were recorded on the late date of October 1, 1992 (Alan Wormington), while six (not fresh) were still present on November 3, 1990 (Alan Wormington).

Larval Foodplants:

Many plants in the mustard (Cruciferae) family are used, including cultivated varieties such as cabbage, broccoli and cauliflower, etc. (Opler & Krizek 1984: 75). Numerous plants are undoubtedly utilized at Point Pelee; common species include Tower Mustard (*Arabis glabra*),

Tumble Mustard (*Sisymbrium altissimum*) and Garlic Mustard (*Alliaria officinalis*). Also commonly used at Point Pelee is Clammyweed (*Polanisia dodecandra*), a foodplant not mentioned in major publications; however, related species are listed as known foodplants (e.g., see Scott 1986: 216-217).

Subspecies:

There are no recognized subspecies of Cabbage White; North American populations are derived from Europe.

Great Southern White (*Ascia monuste*)

— **Extremely Rare Immigrant** —

The one Canadian record was observed during a period when several additional southern species appeared, including Pipevine Swallowtail, were observed at Point Pelee; the occurrence remains today as the only known record for Ontario and Canada (Layberry *et al.* 1998: 98). The species is highly migratory, there are occurrences north to North Dakota.

Broods and Flight Period:

Scott (1986: 223) states that males live, on average, only about five days in nature; since the Point Pelee individual appeared to be relatively fresh, this indicates that it had probably travelled to our area on days immediately preceding the observation.

Abundance:

The single Point Pelee occurrence pertains to a male that was observed on June 16, 1981 (Alan Wormington). Unfortunately the individual was not collected; therefore, the details as originally published by the author (see Wormington 1982b) are worth repeating here to support the record: “On June 16 I observed a male great southern white in the vicinity of the Visitor Centre at Point Pelee National Park. Although I was unable to capture this individual, I was able to approach it closely and observe it well: large size, giving the impression of being twice the size of the cabbage white, totally unmarked white above except for bold blackish markings on the extreme apex of the forewing above, and a strong, direct manner of flight. The individual was moving purposefully in a northerly direction, so was therefore assumed to be migrating.”

Larval Foodplants:

It is perhaps unlikely that the Great Southern White has ever reproduced at or near Point Pelee, but several suitable foodplants are found in our area. These include numerous species in the

mustard (Cruciferae) family as listed by Scott (1986: 223).

Subspecies:

Subspecies *phileta* is found along the Gulf Coast from Louisiana to Florida; although highly migratory (particularly within Florida), there are apparently few records north of its normal range. At least formerly (it may now be extirpated), a population that was present along the southeast coastal plain of the United States from Georgia to Virginia was described by Klots (1951: 202-203) as subspecies *cleomes*. This population closely resembles nominate *monuste* of Texas and Mexico as outlined by Howe (1975: 381-382). Some authors have suggested (*in litt.*) that this taxon may be, in fact, *monuste*, its presence on the southeast coast the result of temporary colonization. If this supposition is correct, then clearly the most migratory populations are nominate *monuste* and the Point Pelee individual is probably referable to this subspecies; however, since the specimen was not collected, the subspecific identify can only be assumed.

Common Sulphur (*Colias philodice*)

— **Uncommon to Common Immigrant and Seasonal Colonist** —

William W. Saunders reported Common Sulphur at Point Pelee on June 30, 1882 (Saunders 1885). Percy A. Taverner considered it common here on September 5, 1909.

Unlike Orange Sulphur, female Common Sulphurs exhibit much less individual variation. Though apparently not mentioned in the literature, I have noted that Common Sulphur tends to be quite wary and thus more difficult to approach compared to Orange Sulphur; at times this may assist in the identification of some individuals.

Broods and Flight Period:

Since the first (spring) brood is mostly sedentary, there are very few recorded observations at Point Pelee early in the year. Subsequent broods (at least 3) are present from the middle of June to late October. ***Early Dates (first brood):*** one on May 5, 1983 (Paul Jones); one (fresh male) on May 6, 1982 (Alan Wormington). ***Late Date (first brood):*** one (fresh male) on May 24, 1988 (Alan Wormington, Stephen T. Pike). ***Early Date (second brood):*** one (fresh male) on May 30, 2000 (Alan Wormington, Henrietta T. O'Neill); one (extremely fresh male) on May 31, 1999 (Alan Wormington, Dan Simard). ***Late Dates (all broods):*** one (extremely fresh male) on November 16, 2015 (Alan Wormington, Henrietta T. O'Neill); one (worn female) on November 13, 1989 (Alan Wormington).

Abundance:

The spring brood is exceedingly rare at Point Pelee with few recorded observations; however,

the species becomes increasingly numerous as the season progresses, when more than ten per day can be regularly found in late summer and fall. On no single occasion has this species been noted to outnumber the related Orange Sulphur (at least in modern times); on very rare occasions, however, the two species might be present in equal numbers. **Maximum Counts:** 240 (fresh) on September 28, 1998 (Alan Wormington); 140 (fresh to worn) on October 9, 1995 (Alan Wormington, Tim Sabo); 75 (fresh) on October 1, 1992 (Alan Wormington); seven (fresh) were found on the late date of November 8, 2001 (Alan Wormington, Henrietta T. O'Neill *et al.*). The presence of the pure yellow form of Orange Sulphur (form *ariadne*) has caused some confusion at Point Pelee, and it is possible that some high counts of Common Sulphur here are slightly inflated by the presence of such individuals

Larval Foodplants:

Numerous legumes (Fabaceae) are selected, including various clovers (*Trifolium*). Opler & Krizek (1984: 64-65) indicate that White Clover (*Trifolium repens*) is preferred in much of eastern North America, but Scott (1986: 198-199) lists numerous other species that are used. In areas adjacent to Point Pelee National Park — and throughout southern Ontario — significant populations are often associated with fields of Alfalfa (*Medicago sativa*).

In the Tip area, individual females have been observed laying eggs on two separate occasions — on White Clover on August 30, 1995 (Alan Wormington) and on Yellow Sweet Clover (*Melilotus officinalis*) on September 18, 2000 (Alan Wormington, Henrietta T. O'Neill).

Subspecies:

Nominate *philodice* is the subspecies found at Point Pelee and throughout eastern North America.

Orange Sulphur (*Colias eurytheme*)

— Abundant Immigrant and Seasonal Colonist —
— Rare Temporary Resident —

Apparently the Orange Sulphur was less common in the past than is true today. For example, the species was not mentioned by William W. Saunders as being present during his visit to Point Pelee on June 29-30, 1882 (Saunders 1885). The first reference to its presence here is given by Percy A. Taverner (1914), who found it during the summer of 1913 without providing any specific details or observation dates.

It has always been uncertain if this species is capable of over-wintering at Point Pelee or anywhere else in southern Ontario, even though it is known that the majority of individuals seen each spring in the province are definitely immigrants. Every year the first individuals seen each

spring are almost always in various states of wear, demonstrating that they are indeed immigrants from the south. However, the species undoubtedly does over-winter at Point Pelee if only on rare occasions. One certain example involves a small, female Orange Sulphur that was so fresh (newly emerged) that it was incapable of sustained flight; it was observed at the North Dike on May 5, 1998 (Alan Wormington).

Females of the species can be extremely variable in appearance. In addition to typical orange individuals, others can be clear white (form *alba*); white with a varying amount of yellow or peach colouring on the, or entirely pure yellow (form *ariadne*). Males, as a group, are not as variable (for example, *alba* males are extremely rare and none have been found at Point Pelee), but they can also be pure yellow. In summer, individuals of either sex that are largely yellow but with varying amounts of orange colouring on the forewings are considered to be probable hybrids with Common Sulphur. On the other hand, similar individuals can also be encountered in spring (immigrants from the south) or late in the season that also resemble such hybrids, but in fact are seasonal (cold-weather) forms of the species. Obviously, the subject of hybrids and various forms that occur is highly complex; as such, positive identification of many individuals encountered at Point Pelee can be quite perplexing at times, if not impossible.

Broods and Flight Period:

Small, dull individuals were seen around Dallas area in mid-February 2002 by AW. ***Early Dates:*** one (not fresh) on April 15, 2000 (Henrietta T. O'Neill); one (fairly fresh female) on April 18, 2002 (Alan Wormington); one (fairly fresh female) on April 23, 2001 (Alan Wormington). ***Late Dates:*** two (fresh male + fresh typical female) on December 1, 2011 (Alan Wormington); one (not fresh *alba* female) on November 26, 1989 (June M. Gordon, Alan Wormington, James N. Flynn); one on November 20, 1990 (William H. Foott, Lorraine H. Foott).

Abundance:

Spring immigrants are generally few in number, when one or several individuals are to be expected per day. However, as the season progresses this species becomes increasingly more numerous with the emergence of subsequent broods and by late summer and fall it is not unusual to encounter hundreds of individuals. ***Maximum Counts:*** 10,000 to 25,000 on September 18, 1993 (Alan Wormington); 2020 (fresh to worn) on September 27, 1997 (Alan Wormington, James N. Flynn, Stephen T. Pike); 1175 (fresh to worn) on October 17, 1995 (Alan Wormington); 1086 (fresh to worn) on October 1, 1992 (Alan Wormington); 35 (fresh to worn) on May 7, 2000 (Alan Wormington, William G. Lamond, Kevin A. McLaughlin, S. Bruce Kellett) is a high count for spring immigrants, while eight (extremely fresh) on November 25, 2011 (Alan Wormington) is a high count for the late date. The exceptional count in 1993 (see Wormington 1994c) was of an apparent migration moving southwest off the Tip area.

Larval Foodplants:

Although many plants in the legume (Fabaceae) family are known larval foodplants, various clovers are likely used more often than other species. Of the numerous foodplants listed by Scott (1986: 196-198), several are found at Point Pelee (Jellicoe 1984: 13).

At Point Pelee, Orange Sulphur has been observed to lay eggs on White Sweet Clover (*Melilotus alba*), Yellow Sweet Clover (*Melilotus officinalis*), Alsike Clover (*Trifolium hybridum*) and Alfalfa (*Medicago sativa*).

Subspecies:

Despite the very wide range of Orange Sulphur — found throughout much of North America from coast to coast — there are no recognized subspecies.

Southern Dogface-Sulphur (*Zerene cesonia*)

— Extremely Rare Immigrant —
— Extremely Rare Seasonal Colonist —

Historical records clearly demonstrate that Southern Dogface-Sulphur occurred more frequently in Ontario than is true today, despite the considerable increase in butterfly enthusiasts. There are Ontario records for the years 1931 and 1972, but none later, until the 2008 occurrences at Point Pelee. There must have been a major northward movement in 1896, as numerous individuals were recorded in southern Ontario (north to Orillia); the species was reported to have reproduced on Staten Island, New York (Cech 1993).

Broods and Flight Period:

Abundance:

The first known Point Pelee occurrence involved a single (fresh) female that was collected on June 24, 1931 (G. Stuart Walley; specimen in CNC).

There was a series of observations at Point Pelee during 2008. A worn female on the beach just south of the entrance to PPNP on June 16 (Henrietta T. O'Neill *et al.*). Then, an extremely fresh individual was found (and photographed) at West Beach on August 31, 2008 (Alan Wormington). At the same location two more extremely fresh individuals were found on September 12 (J. Michael Tate). These observations at West Beach almost certainly indicates that the species reproduced at this site, based on an egg-laying female that arrived earlier in the season.

Larval Foodplants:

There is no direct evidence that this species has reproduced at Point Pelee, but suitable larval

foodplants are present. These include various legumes (Fabaceae) as reported by Scott (1986: 201-202), and several of these are found at Point Pelee (Jellicoe 1984: 13) including several clovers (*Trifolium*) and Alfalfa (*Medicago sativa*). If reproduction occurred at West Beach during 2008, the suspected larval foodplant at that locality is False Indigo (*Baptisia australis*); in recent years colonies of Southern Dogface-Sulphur in northern Ohio (Toledo) have been found in association with this plant.

Subspecies:

The only subspecies found in North America is nominate *cesonia*; additional subspecies are present in South America.

Cloudless Sulphur (*Phoebis sennae*)

— Extremely Rare Immigrant —

(1) fresh _	Sept. 20, 1953	D. Monty Wood	in CNC
(1) not fresh _	Sept. 20, 1953	D. Monty Wood	in CNC
- same as above for (2) specimens in ROM? (see Riotte 1967)			
(1)	Sept. 25, 1954	P.D. Syme	in PDS

Broods and Flight Period:

This species flies year-round in the southern United States , but Point Pelee records cover the period of May 30 to October 23 inclusive

Abundance:

The species has been recorded at Point Pelee during 7 different years, namely 1914, 1953, 1954, 1994, 1995, 1998 and 1999; somewhat surprisingly, multiple individuals were reported during all of these years with the exception of 1999.

In 1914, one was recorded on October 4 (Percy A. Taverner); the following day another individual was seen by the same observer, while other observers (James H. Fleming, J.S. Wallace) recorded two individuals, In 1953, on September 20-21, the species was stated to be "present in considerable numbers" (D. Monty Wood); on September 20, two males and three females were collected (specimens in CNC and ROM).

In 1994 the species was noted on two occasions — one (worn female) on September 18 (Tim Sabo, Alan Wormington; specimen in ONHP), and one (not fresh male) on October 22 (Alan Wormington; specimen in ONHP).

The following year, 1995, the species was again recorded at Point Pelee. Two (fresh) individuals were seen on October 13 (Alan Wormington), followed by one (not fresh female) on October 23 (Alan Wormington; specimen in ONHP).

During 1998 the Cloudless Sulphur was much in evidence at Point Pelee; records include one (ragged male) on May 30 (Jay Cossey), one (female) on June 8 (Carrie Morgan) and one (fresh

male) on June 15 (Alan Wormington); just north of Point Pelee, an individual was observed flying south toward the Park on September 18 (Alan Wormington).

In 1999, one (fresh male) on July 25 (Alan Wormington, James N. Flynn).

Larval Foodplants:

Various sennas (*Cassia*) are often cited as the sole larval foodplant for Cloudless Sulphur (*e.g.*, see Opler & Krizek 1984: 69-70). Sennas are not found at Point Pelee (Jellicoe 1984) and are rare and local in extreme southern Ontario; therefore, it is doubtful if Cloudless Sulphur has ever reproduced at or near our area.

Subspecies:

Point Pelee specimens are referable to *eubule*, the widespread subspecies of North America.

Mexican Sulphur (*Eurema mexicanum*)

— **Extremely Rare Immigrant** —

The collection of this species in 1882 at Point Pelee National Park remains today as the only record for Ontario (Layberry *et al.* 1998: 116). This early occurrence also represents the first record for Canada, although the species has since been found very rarely in both Manitoba (Klassen *et al.* 1989: 80) and Saskatchewan (Hooper 1973: 81).

The normal range is Mexico but it regularly migrates to central and southwestern US; it has also been recorded in Indiana (Shull 1987: 132), Ohio (Iftner *et al.* 1992: 83) and Michigan (Nielsen 1999: 59).

Broods and Flight Period:

In Mexico the species is on the wing almost continuously throughout the year; reflecting this flight period, immigrants northward have been found anytime from June through September.

Abundance:

The single Point Pelee record was on June 30, 1882 (William W. Saunders *et al.*). Quoting from Saunders (1885), who wrote an account of his visit including the discovery of this species “Late in the afternoon, while beating about among the bushes on the sand hills on the eastern shore, a yellow butterfly started up which at first was thought to be a pale *C. philodice* [Common Sulphur], but there was something unusual about its appearance and manner of flight which led us to pursue it until captured. Imagine our surprise when we found it to be a female specimen of *Terias Mexicana*”

Although Saunders states that the collected specimen was a female, his published description clearly corresponds to that of a male. The specimen (a worn male) now resides in the CNC; the specimen labels do not include a collection date, but one label bears an old, handwritten notation “taken at Point Pelee, Ontario.”

Due to the writing style of Saunders (*ibid.*), Bethune (1895) incorrectly interpreted the capture date of the 1882 specimen as June 29, whereas Holmes *et al.* (1991: 162) misinterpreted the collection date as June 28; the June 28 error was also repeated by Layberry *et al.* (1998: 116). As listed above, the correct occurrence date is actually June 30.

Larval Foodplants:

Several tropical species are listed as foodplants for this species, including Acacia (*Acacia*). Some authors also cite sennas (*Cassia*) as a foodplant, but this is doubted by Opler (1992: 85-86). Reproduction at our latitude is, therefore, most unlikely.

Subspecies:

The Mexican Sulphur is monotypic with no recognized subspecies.

Little Sulphur (<i>Eurema lisa</i>)
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— **Rare to Common Immigrant and Seasonal Colonist** —

The Little Sulphur was first reported by William W. Saunders, based on his visit to Point Pelee on June 29-30, 1882 (see Saunders 1885). C.H. Young collected a specimen on June 27, 1910 (specimen in CNC). Percy A. Taverner reported it during the summer of 1913 (Taverner 1914). From these early reports it appears that the Little Sulphur has always been a regular visitor to Point Pelee and southern Ontario.

Scott (1986: 208-209) states that in the fall, adults migrate southward. This seems unlikely (at least in Ontario) since very few individuals are found at Point Pelee at this time of year. Point Pelee is an exceptional location in fall to monitor the southbound movements of many diurnal migrants — and this includes birds, dragonflies, butterflies and other insects, etc. — so if Little Sulphur was regularly moving southward in the Great Lakes area during the fall, many individuals would undoubtedly be detected here.

one on June 27, 1910 (C.H. Young; specimen in CNC).

one on June 27, 1913 (C.H. Young; specimen in CNC).

Broods and Flight Period:

Most authors consider “white” females (form *alba*) to be scarce in the overall population of the species, but initial immigrants arriving at Point Pelee tend to have a higher-than-normal percentage of this form. Some years there is a strong influx of initial immigrants, during the period of about the middle of June to the middle of July; after this period, only one or two individuals are recorded on any given day. ***Early Dates:*** two (extremely fresh male + fresh female) on May 13, 2000 (Alan Wormington *et al.*, Hugh G. Currie, Robert J. Yukich), one (extremely fresh male) on

May 19, 1995 (Alan Wormington); one (extremely fresh male) on May 22-23, 1998 (Alan Wormington *et al.*) — these observations must be considered exceptional for the entire Great Lakes Region, since the earliest “date of arrival” listed for Ohio is June 2 (Iftner *et al.* 1992: 82) and for Michigan is June 6 (Nielsen 1999: 56-57). **Late Dates:** one (extremely fresh male) on October 27, 2014 (William G. Lamond); one (fairly fresh male) on October 13, 1995 (Alan Wormington); one on October 12, 1998 (Robert J. Yukich, Karen J. Yukich).

Abundance:

... **Maximum Counts:** 134 (extremely fresh to not fresh) on July 19, 1992 (Alan Wormington, Tim Sabo); 45 (extremely fresh to fresh) on June 8, 1999 (Alan Wormington, Henrietta T. O’Neill).

Larval Foodplants:

Various sennas (*Cassia*) are the only confirmed foodplants according to Opler & Krizek (1984: 75-76), but these are absent at Point Pelee (Jellicoe 1984) and very rare elsewhere in extreme southern Ontario. Little Sulphur almost certainly reproduces in Ontario, so other foodplants must be utilized. Scott (1986: 208-209) lists Hog Peanut (*Amphicarpaea bracteata*), which is common at Point Pelee. It is probable that additional legumes (Fabaceae) are utilized in southern Ontario (including Point Pelee), but this requires confirmation.

Subspecies:

The subspecies occurring at Point Pelee is nominate *lisa*, which is found throughout North America.

Sleepy Orange (*Eurema nicippe*)

— **Extremely Rare Immigrant** —

In North America the Sleepy Orange is normally found in the southern United States and Mexico; however, it is regularly found much further north as either a stray, seasonal colonist or temporary resident. In Ohio, at the present time, the species is considered rare to uncommon, but historically was more numerous; most records are from the southern part of the state where the species has established seasonal colonies with some frequency (Iftner *et al.* 1992: 83-84). In Michigan it has been recorded on only two occasions — in 1972 and 1996 (Nielsen 1999: 58).

Historically the Sleepy Orange has been attributed to Point Pelee by a number of authors over the years, but evidence of any such occurrence is entirely lacking. The source of these statements probably originates from Bethune (1895) who stated (without providing any specific details) that “This southern butterfly has been once taken at Point Pelee, Ont.” In contrast, other rare species in his paper have supporting details such as occurrence date and collector, etc. Apparently the

only naturalist interested in butterflies to have visited Point Pelee up to this time was William W. Saunders, but his published account pertaining to his visit in 1882 (see Saunders 1885) does not include Sleepy Orange. Based on the available evidence, this historical report must be considered erroneous until such time as any additional information (if it exists) can be located.

Additional authors have also attributed Sleepy Orange to Point Pelee based on the statement by Hess (1979) that an extant specimen is in the Canadian National Collection (Ottawa); however, the curators of that collection have repeatedly stated that no such Point Pelee specimen exists (J. Donald Lafontaine, personal communication to the author).

The only Point Pelee records were in 1992 and 1998; the individual in 1992 occurred during a short period of a few days when the related Little Sulphur (*Eurema lisa*), another highly-migratory southern species, was present here in exceptional numbers. A summary of the status and distribution of Sleepy Orange in Ontario was recently published by the author (Wormington 1999a). The two Point Pelee occurrences represent the fourth and fifth of only five records known for the entire province. The other Ontario records are: September 15, 1934, at Kitchener, Waterloo Regional Municipality (E. Leonard James, specimen in WAT); June 21, 1978, at Quetico Provincial Park, Rainy River District (Marie Nelson, see Hess 1979); and May 14, 1990, at Scarborough, Metropolitan Toronto (Joseph C. Jones; see Hess 1991: 35).

Broods and Flight Period:

Throughout much of the southern United States there are three or four broods with a flight season extending from early spring to late fall; both Howe (1975: 372-373) and Scott (1986: 206) state that the species over-winters as an adult. In the extreme south (*e.g.*, along the entire Gulf Coast from Texas to Florida) the Sleepy Orange is on the wing throughout the year.

Occurrences northward can be surprisingly early in the season as demonstrated by records on April 15 in northern Illinois (Irwin & Downey 1973: 18); “April” in Ohio (Iftner *et al.* 1992: 83-84); “May” in New York (Shapiro 1974: 22); and the above-mentioned Ontario (Scarborough) record on May 14.

Abundance:

The Sleepy Orange has been found at Point Pelee only in 1992 and 1998 when single strays were encountered; details of these occurrences are as follows.

The first record was on July 16, 1992, when a fairly fresh male was encountered at DeLaurier Fields (Alan Wormington; specimen in ONHP).

Along the main park road adjacent to DeLaurier Homestead, a fresh female was found on June 13, 1998 (Henrietta T. O’Neill); this individual was examined in the hand, and then released.

Larval Foodplants:

Most authors list various sennas (*Cassia*) as the only foodplant; sennas are not present at Point Pelee (Jellicoe 1984) and are very rare elsewhere in southern Ontario (need reference). Scott

(1986: 206) includes clover (*Trifolium*) as a presumed foodplant, but according to Opler & Krizek (1984: 78) this is based solely on laboratory findings and may not apply under natural situations.

Subspecies:

The Sleepy Orange is monotypic with no recognized subspecies.

LATE ADDITION: The species was reported at Point Pelee eleven times in the migrant year of 2012, between May 5 and May 12, by a total of eighteen observers.

Dainty Sulphur (*Nathalis iole*)

— Extremely Rare Immigrant —

This diminutive butterfly is a resident of the southern United States, but annually it migrates northward into the central part of the continent where individuals rarely reach Manitoba (Opler & Krizek 1984: 79-80). To date this species has been found in Ontario on only six different occasions, during the years pre-1922, 1947, 1987, 2001 (two locations) and 2005. ... (Holmes *et al.* 1991: 162); there are also numerous records for Indiana (Shull 1987: 136), Ohio (Iftner *et al.* 1992: 84) and Michigan (Moore 1960: 24; Nielsen 1999: 60).

See O'Neill (2001b); also McIlveen & McIlveen (2001).

Broods and Flight Period:

Abundance:

An extremely fresh female was found at West Beach on September 25, 2005 (Ian M. Richards).

Larval Foodplants:

Subspecies:

LATE ADDITION: there were many reports of this species in the migrant year of 2012, sometimes in good numbers, in *Essex* and *Norfolk* and once in *Middlesex*.

Harvester (*Feniseca tarquinius*)

— Extremely Rare Immigrant and Seasonal Colonist —

— Extremely Rare Temporary Resident —

The species has been recorded at Point Pelee only during the years 1992, 1995, 1998, 1999, 2000, 2001 and 2013.

The status of this species is apparently changing in southwestern Ontario. Prior to the first Point Pelee record in 1992, the Harvester was curiously unrecorded from all of Essex, Kent and Lambton counties (*e.g.*, see Holmes *et al.* 1991: 78); subsequently the species has been recorded

in Essex County several times at Point Pelee, and also Windsor (1999 and 2000) and Pelee Island (2000). The species is generally not considered as migratory, but one of its old names is “The Wanderer” which implies that it might sometimes migrate.

Formerly the nearest localities known for the species in southern Ontario are London in Middlesex County and the extreme east end of Elgin County (see Holmes *et al.* 1991: 78); both of these localities are about 150 km northeast of Point Pelee. The species is also found widely in southern Michigan (Nielsen 1999: 61-62) and northern Ohio (Iftner *et al.* 1992: 85). The source of Point Pelee individuals could have been any of these regions or from much farther afield; in any event, it is an extremely unusual record.

Broods and Flight Period:

In southern Ontario and adjacent regions there are probably three broods per year; in these areas the flight period extends from mid-April until late September.

Abundance:

The first record for Point Pelee was perhaps the most interesting, since it took place at the extreme Tip. This event occurred on July 19, 1992, when a worn female was encountered (Tim Sabo, Alan Wormington); this completely out-of-place individual was an obvious stray.

In 1995, on August 6, two individuals (not fresh males) were found along Shuster Trail (Robert Z. Dobos, Barbara N. Charlton, Kevin A. McLaughlin, William G. Lamond, Alan Wormington). The presence of two individuals at the same location, in suitable habitat, clearly indicates the presence of a colony. Presumably an egg-laying female had arrived earlier during the same year or (less likely) the year previous. There have been no subsequent sightings at Shuster Trail, indicating that this population was very temporary (and tenuous) in nature.

An extremely fresh individual was found at West Beach on the very early date of May 10, 1998 (Stephen T. Pike, Katherine A. Gignac *et al.*); the early date and freshness of this individual indicates that the species successfully over-wintered at Point Pelee, hence its status here as a temporary resident.

In 1999, one on June 18 at the west side of the Tip (observers not known).

One (fresh) on July 6, 2000, at a mud puddle in the parking area of DeLaurier Picnic Area (Henrietta T. O’Neill).

One extremely fresh on July 29, 2001, at SE Woodland Nature Trail (Alan Wormington).

One on June 16, 2013, at West Beach (Stephen T. Pike, Cassandra L. Gagnon, Robert G. Hill).

The consecutive records for 1998, 1999, 2000 and 2001 is good evidence that the species was a temporary resident at Point Pelee during that multi-year period.

Larval Foodplants:

“Foodplants” of this species is a misnomer, since the larvae are uniquely carnivorous amongst North American butterflies. Larvae instead feed on wholly aphids (Eriosomatidae), which in turn are found on a variety of trees and shrubs (Opler & Krizek 1984: 81-82). Woolly Aphids found

on alders (*Alnus*) are often stated to be preferred, but alders are not found at Point Pelee (Jellicoe 1984). Scott (1986: 356-357) lists several other “host” plants, some of which are found at Point Pelee (Jellicoe 1984); these include Winterberry (*Ilex verticillata*), White Ash (*Fraxinus americana*), Silver Maple (*Acer saccharinum*) and Common Apple (*Malus pumila*).

Subspecies:

Point Pelee individuals are referable to nominate *tarquinius*.

Bronze Copper (*Lycaena hyllus*)

— **Uncommon Permanent Resident** —

Most individuals are found at sites immediately adjacent to the Pelee Marsh, such as the North Dike, the old Camp Henry site (opposite The Dunes Picnic Area) or Ander's Field, etc.; however, on rare occasions wandering individuals may appear anywhere, including the Tip area.

(1) fresh female July 3, 1920 N.K. Bigelow in ROM

Broods and Flight Period:

Three broods are definitely produced each year; this is always a relatively uncommon species, and no brood seems particularly more numerous than any other. Although broods may overlap slightly, and brood timing can obviously be influenced by weather from year-to-year, adults are generally on the wing from the middle of June to early July (first brood), late July to early September (second brood) and the middle of September to early October (third brood). **Early Dates:** one (extremely fresh male) on May 30, 1998 (Alan Wormington); one (extremely fresh male) on June 1, 1985 (Alan Wormington). **Late Dates:** one (worn female) on October 20, 2005 (Alan Wormington); one on October 14, 1984 (G. Tom Hince).

Abundance:

This species is likely to be encountered anytime from the middle of June to early October; however, unless one is specifically searching the known haunts of the species (particularly the North Dike, for example), it is unlikely that more than a single individual will be encountered on any given day. **Maximum Counts:** five (fairly fresh) at the North Dike on October 9, 1995 (Alan Wormington, Tim Sabo); five (fresh) at the North Dike on June 13, 1998 (Henrietta T. O'Neill); five on September 17, 1998 (Alan Wormington, Henrietta T. O'Neill).

Larval Foodplants:

Various docks (*Rumex*) and knotweeds (*Polygonum*) are stated as larval foodplants (*e.g.*, Scott 1986: 388); although species in both of these groups are present at Point Pelee (Jellicoe 1984: 9), Bronze Copper is usually found in association with docks.

Subspecies:

There are no recognized subspecies of Bronze Copper.

Acadian Hairstreak (*Satyrrium acadicum*)

— Uncommon Permanent Resident —

First record was one on July 9, 1931 (W.J. Brown; specimen in CNC) The species was not found again at Point Pelee until 1982, when a tiny colony was discovered in a small opening northeast of Tilden's Woods (Alan Wormington). The following year none could be found at this site and it was feared that the area had become too overgrown — an entire decade would then pass before the species was recorded once again at Point Pelee! In 1992 several were found at DeLaurier Fields (Alan Wormington), a locality where the species has now been found annually; it has also been found regularly at adjacent Ander's Field where additional suitable habitat (and larval foodplants) exists. These localities are only a mere few hundred metres from the small colony that was under observation in 1982, indicating that the species had always been present but was undoubtedly overlooked due to low population levels.

Broods and Flight Period:

There is a single brood only, with a relatively short flight period that only lasts for about two weeks; the short flight period (influenced somewhat by early or late seasons) occurs during the period of early to late July. ***Early Date:*** three (extremely fresh) on June 22, 1998 (Alan Wormington). ***Late Date:*** one (ragged female) on August 5, 1997 (Alan Wormington).

Maximum Counts: 26 (fresh) on July 11, 1995 (Alan Wormington); 14 (fresh to worn) on July 10, 1996 (Alan Wormington).

Larval Foodplants:

Various willows (*Salix*) are larval foodplants; of those listed by Scott (1986: 361), the following are found at Point Pelee as listed by Jellicoe (1984: 8): Sandbar Willow (*Salix exiqua*), Pussy Willow (*Salix discolor*), Black Willow (*Salix nigra*) and Slender Willow (*Salix petiolaris*).

Subspecies:

Nominate *acadicum* is the subspecies found at Point Pelee and throughout the southern Great Lakes Region.

Banded Hairstreak (*Satyrrium calanus*)

— Common Permanent Resident —

In the right season the flowers of any patch of Common Milkweed (*Asclepias syriaca*) will usually yield one or more individuals of this species.

Broods and Flight Period:

Early July (occasionally late June) to late July. **Early Dates:** one (extremely fresh) on June 16, 1998 (Henrietta T. O'Neill); one (fresh male) on June 22, 1991 (Alan Wormington); one (extremely fresh) on June 22, 1999 (Alan Wormington). **Late Date:** two (fairly fresh) on August 10, 1996 (G. Tom Hince, William G. Lamond *et al.*).

Abundance:

... **Maximum Counts:** 18 (fresh to worn) on July 11, 1995 (Alan Wormington); 17 (fresh to worn) on July 12, 1983 (Alan Wormington, Janice E. Jellicoe); in 1991, a very early year, six (fresh) were found on the very early date of June 23 (Alan Wormington).

Larval Foodplants:

These include various oaks (*Quercus*), hickories (*Carya*), ashes (*Fraxinus*) and Black Walnut (*Juglans nigra*) as detailed by Scott (1986: 363-364); any or all of these could be used as foodplants at Point Pelee.

Subspecies:

The subspecies found at Point Pelee and throughout most of eastern North America is *falacer*.

Hickory Hairstreak (*Satyrrium caryaevorum*)

— Extremely Rare Immigrant —

This species is also probably resident at Wheatley Provincial Park, *Chatham-Kent*, where three individuals were recorded on August 10, 1996 (Robert Curry *et al.*); the species was recorded there again in 1997. The species has also been recorded at Pelee Island (Kamstra 1989), where it is probably a permanent resident.

In Michigan the species is considered locally common, where it is found in numerous counties in the southern part of the state (Nielsen 1999: 74-75).

The Hickory Hairstreak has been detected at Point Pelee on only six occasions, during the years 1993, 1995, 1998 and 1999. It is possible that this species could, at times, be overlooked at Point Pelee, but the available records indicate that it is strictly a very rare immigrant. Larval foodplants are present at Point Pelee in abundance, so it is not known why this species has been found here so infrequently.

Broods and Flight Period:

There is one brood per year, between late June and early August.

Abundance:

This species has been recorded at Point Pelee on six different occasions, during the years 1993, 1995, 1998 and 1999; details of these occurrences are as follows.

In 1993 one (fairly fresh female) at the west side of the Tip on July 6 (Alan Wormington). This was followed by the discovery of a dead individual at West Beach on August 12, that was trapped in a spider's web (Alan Wormington).

In 1995 there were two recorded observations, one (a fairly fresh female) on July 6 at the Sparrow Field (Alan Wormington), followed by one (a fairly fresh female) on July 11 at DeLaurier Fields (Alan Wormington).

In 1998 an extremely fresh male was found on June 27 at the Sparrow Field (Alan Wormington).

In 1999, one (a fairly fresh male) on June 25 at the Sparrow Field (Alan Wormington).

Larval Foodplants:

There is no evidence that this species has ever reproduced at Point Pelee, but numerous suitable foodplants are present; these include various hickories (*Carya*), White Ash (*Fraxinus americana*), Black Ash (*Fraxinus nigra*), Black Walnut (*Juglans nigra*) and Red Oak (*Quercus rubra*) as listed by Scott (1986: 363). As its name implies, hickories are probably preferred over other foodplants.

Subspecies:

The Hickory Hairstreak is monotypic with no recognized subspecies.

Striped Hairstreak (*Satyrium liparops*)

— Rare Permanent Resident —

This species is found throughout Point Pelee, where encounters are as likely on woodland trails as more open areas, where it is usually found nectaring on flowers.

(1) fresh _ June 30, 1975 Doug Brown in PPNP

Broods and Flight Period:

There is one brood with a relatively short flight period, typically spanning about two weeks from early July to the middle of July, rarely later. **Early Dates:** one (extremely fresh) on June 23, 1991 (Alan Wormington); one (extremely fresh female) on June 23, 1998 (Alan Wormington). **Late Date:** one (worn) on August 3-5, 1992 (Alan Wormington).

Abundance:

The total population of this species at Point Pelee must be relatively low, since it is unusual to encounter more than single individuals on a daily basis. **Maximum Counts:** The highest maximum count is only three, attained on six different occasions during the years 1983, 1992 and 1993.

Larval Foodplants:

Plants in the heath (Ericaceae) and rose (Rosaceae) families are utilized most often according to Opler & Krizek (1984: 94-95); known foodplants in the heath family are absent at Point Pelee, but several in the rose family are present including plums and cherries (*Prunus*), hawthorns (*Crataegus*), juneberries (*Amelanchier*), brambles (*Rubus*) and apples (*Malus*). Scott (1986: 362) reports additional foodplants that are either erroneous or probably used infrequently; these include ashes (*Fraxinus*), hickories (*Carya*), Blue Beech (*Carpinus caroliniana*), Red Oak (*Quercus rubra*) and Trembling Aspen (*Populus tremuloides*).

Subspecies:

Point Pelee populations are subspecies *strigosum*, which is found throughout most of the Great Lakes Region.

Southern Hairstreak (*Fixsenia favonius*)

— **Extremely Rare Immigrant** —

The species has been reported in Ontario in 1868 at Port Stanley, Elgin County, by Edmund Baynes Reed, in 1894 near Grimsby, Niagara Regional Municipality, by William Metcalfe, in 1919 at St. Thomas, Elgin County (specimen in UWO) and regularly since 2008 at Reid Conservation Area, Lambton County. It has also been recorded in a number of northern states including Indiana, Michigan, Ohio and New York as listed by Opler & Krizek (1984: 104). In the north *ontario* is usually encountered as single individuals only, indicating that most occurrences probably represent stray immigrants — for example, there is only a single (1975) record for the

entire state of Michigan (Nielsen 1999: 76-77).

Broods and Flight Period:

This species has a single brood; in the northern part of its range (such as Ohio), the species typically flies from the middle of June to the beginning of July, always before the peak period of the similar-appearing Banded Hairstreak.

Abundance:

The only Point Pelee record involved a worn male that was found at the west side of the Tip on June 14, 1999 (Henrietta T. O'Neill, Alan Wormington). This individual was nectaring on the flowers of Staghorn Sumac, where it was observed from 5:00 to 6:00 p.m.; the literature suggests (*e.g.*, see Ohio) that this species is most likely to be encountered late in the day, when individuals perhaps descend from the tree canopy in search of flowers.

Subspecies:

The subspecies of Southern Hairstreak that occurs in the northern part of its range is *ontario*, formally considered a separate species and for a time was referred to as Northern Hairstreak. The type specimen of *ontario* (now in the CNC) was collected in July, 1868, by E. Baynes Reed at Port Stanley, Elgin County, Ontario (see Reed 1868).

Olive Hairstreak (*Callophrys grynea*)

— Uncommon to Common Permanent Resident —

William W. Saunders was the first to report Olive Hairstreak at Point Pelee when his visiting party found the species here on June 29, 1882; this represented the first record for Ontario and Canada (see Saunders 1885). Percy A. Taverner and W.W. Newcomb found it common at Point Pelee on May 31, 1909. They discovered that numbers of the species could be easily found by “tapping” the trunks of Red Cedar (*Juniperus virginiana*). The species was subsequently described as “common” in both 1910 and 1913 by Percy A. Taverner. Also recorded in 1933 (D.A. Arnott, George M. Stirrett). There were no records from Point Pelee from 1929 to 1963, and the species has never been recorded in Michigan (Nielsen 1999).

Currently the core area of abundance at Point Pelee encompasses West Beach south of the Visitor Centre; including the Woodland Nature Trail. Most individuals are avid visitors to flowers; the spring brood is easily found by closely examining the flowers of Rock Sandwort (*Minuartia michauxii*), while the second brood is not so restricted in its choices. In times of scarcity, the species might be easier to locate by “tapping” the trunks of cedars which causes sitting individuals

to flush.

Broods and Flight Period:

... most years the second brood is as common as the first, but in some years considerably fewer individuals are found; curiously, the second brood went entirely unrecorded in 1996. Adults can be found from late May to late June (first brood) and late July to the middle of August (second brood). ***Early Dates (first brood):*** one (extremely fresh) on May 3, 1999 (Linda Wladorski); one (extremely fresh) on May 5, 2000 (Stephen T. Pike *et al.*); two (extremely fresh) on May 11, 2012 (William G. Lamond, Alan Wormington). In 1998, 1999 and 2000 — very early years — there were numerous observations subsequent to the first; the earliest to be recorded in other years is May 24 (in 1975 and 1988). ***Late Dates (first brood):*** one (worn) on July 1, 1993 (Alan Wormington); x on June 29, 1882 (William W. Saunders *et al.*); one (worn) on June 29, 1995 (Alan Wormington). ***Early Dates (second brood):*** one (extremely fresh) on July 11, 1998 (Jeffrey L. Larson, Michael van der Poorten, Nancy van der Poorten); one (extremely fresh) on July 11, 1999 (Alan Wormington). ***Late Date (second brood):*** one (not fresh female) on August 26, 1992 (Alan Wormington).

Abundance:

the species was considered “common” by many of the historical accounts. Today the species is somewhat erratic in its abundance. During the flight of the first brood, up to ten individuals are regularly encountered; numbers of the second brood are always less than this. ***Maximum Counts:*** 139 (fresh) on May 23, 1998 (Alan Wormington, Stephen T. Pike); 41 (fresh to worn) on August 3, 1998 (Hugh G. Currie *et al.*); 40 on July 30, 1999 (Henrietta T. O’Neill). The exceptional count of 139 in 1998 was obtained by systematically “tapping” the trunks of every available Red Cedar from West Beach to the Tip area, including the Sparrow Field. In an account published by the author (Wormington 1999b) it was stated that medium-sized trees were more productive than large trees, while large trees typically harboured individuals more frequently than very small cedars; one to three hairstreaks were present on every third or fourth cedar that was examined.

Larval Foodplants:

Red Cedar is the only known foodplant of nominate *grynea* (Opler & Krizek 1984: 96-97), the widespread subspecies of eastern North America.

Subspecies:

Only nominate *grynea*; recent authors consider *grynea* and a host of additional taxa, all western

species, as pertaining to a single, complex species (*e.g.*, see Scott 1986: 373-375).

White-M Hairstreak (*Parrhasius m-album*)

— Extremely Rare Immigrant and Seasonal Colonist —

Even in US states adjacent to Ontario this species is not considered a resident. For example, in Indiana stray individuals have been found in five counties (Shull 1987: 156). Remarkably there is only a single record (1964) for the entire state of Michigan (Nielsen 1999: 86-87).

Excluding Point Pelee, the species has been found elsewhere in Ontario near the town of Essex, Essex County, on September 11, 1960 (D. Monty Wood; specimen in CNC); Pelee Island, Essex County, on August 14, 1993 (Tom T. Ikeda) and August 2-3, 2008 (Yukich).

In the spring of 2013 there was an observation of interest, one very fresh at Rondeau Provincial Park on May 2 (Blake A. Mann).

Broods and Flight Period:

In Ohio the latest published date for the entire state is August 27 (Iftner *et al.* 1992: 103); curiously, several of the Ontario records are later than this date.

Abundance:

This species has been recorded at Point Pelee in 1960, 1992, 1999, 2000, 2008 and 2012.

Two worn individuals were recorded on August 31, 1960 (Richard W. Holzman; specimens in CNC and PPNP); the collector stated that these were found “south of Tilden's Woods.”

In 1992 two different individuals were encountered on September 13 — one (fresh) at the Tip (James N. Flynn, June M. Gordon) and one (ragged female) at the northeast corner of Loop Woods (Alan Wormington; specimen in ONHP); both of these individuals, at the time of discovery, were nectaring on goldenrod (*Solidago*).

In 1999, one was found, fresh, on June 18 at the west side of the Tip (Barbara J. Casier, Alan Wormington); at the time of discovery it was nectaring on the flowers of Staghorn Sumac (*Rhus typhina*). Shortly thereafter, on June 28, another individual was found at DeLaurier Trail (Henrietta T. O'Neill, Alan Wormington); this individual was nectaring on Common Milkweed (*Asclepias syriaca*). One (fresh) on August 6 at DeLaurier Fields, followed by another fresh individual on August 9 at the Visitor Centre septic field (Henrietta T. O'Neill). In 2000, one (not fresh) on August 28 in the middle section of the Woodland Nature Trail (Henrietta T. O'Neill); this individual was nectaring on goldenrod. An extremely fresh female was found on the west portion of North Dike (within Point Pelee National Park) on August 2, 2008 (William G. Lamond, Alan Wormington, Kevin A. McLaughlin); the extreme freshness of this individual indicates that the species most certainly arrived earlier in the season, when an immigrant female undoubtedly laid eggs. First found nectaring on Queen Anne's Lace (*Daucus carota*) before switching to Yellow Sweet Clover (*Melilotus officinalis*). **Maximum Count:** five (fresh to worn) on August 22, 2012 (Gary R. Tetzlaff, Joshua D. Vandermeulen, Christopher A. Law, Alan Wormington).

Larval Foodplants:

There is no direct evidence that the species has reproduced at Point Pelee, but circumstances

indicate that it probably did so in 1999, 2008 and 2012. Various oaks (*Quercus*) are considered the normal foodplants; Scott (1986: 381-382) indicates that White-M Hairstreak has specifically been found in association with White Oak (*Quercus alba*), but this species is not present at Point Pelee (Jellicoe 1984: 9). In Ohio (see Pilate 1906) larvae were once found on American Basswood (*Tilia americana*). At Point Pelee various oaks or basswood could be potential foodplants.

Common Gray-Hairstreak (*Strymon melinus*)

— **Rare to Uncommon Immigrant and Seasonal Colonist** —
— **Rare Temporary Resident** —

This species has a rather peculiar status and distribution in Ontario. As an immigrant, the species is rarely encountered except at Point Pelee and less frequently elsewhere along the north shore of Lake Erie. However, permanent populations — although extremely local — are present at a number of sites across the central and northern portions of the province; invariably these populations have been at sites that are either extensively sandy or rocky with extensive stands of Jack Pine (*Pinus banksiana*) or other pines; invariably Sweetfern (*Comptonia peregrina*) is present at these sites, and it has been suggested by Layberry (1993, 1995) that Sweetfern is the only foodplant for these resident populations.

Successful over-wintering at Point Pelee has been suspected on two occasions; the presence of extensive sandy areas may have been a factor.

The species is most likely to be encountered near the Tip or in other sandy areas. This species is highly migratory and individuals may not linger. There have been several recorded instances when significant numbers have been present at Point Pelee, in contrast to few if any at the same locations on the day before or day after.

Broods and Flight Period:

Dates of occurrence tend to be somewhat erratic, but the species can be expected anytime from the middle of June to early October inclusive. **Early Dates:** one (not fresh with a deformed wing and incapable of flight) on April 22, 1988 (Alan Wormington, John E. Pilkington); one (fairly fresh) on April 30, 1990 (Kevin A. McLaughlin) — these two records are both exceptionally early and undoubtedly pertain to resident (over-wintering) individuals; the next earliest record (pertaining to the earliest recorded immigrants) is of one on May 7, 2000 (William G. Lamond, Kevin A. McLaughlin, S. Bruce Kellett). And two ragged specimens were seen on May 21, 1998 (Alan Wormington, Henrietta T. O'Neill *et al.*). **Late Dates:** one (fresh) on November 1, 1999 (Henrietta T. O'Neill); one (worn?) on October 31, 2001 (Henrietta T. O'Neill); one (not fresh) on

October 29, 1998 (Henrietta T. O'Neill).

Abundance:

Sometimes only single individuals are encountered on a daily basis, but most years (particularly in late summer and fall) several can be found per day. **Maximum Counts:** 57 (fresh to worn) on August 22, 2012 (Alan Wormington, Christopher A. Law, Joshua D. Vandermeulen); 48 on September 15, 2010 (Paul D. Carter); 26 (fresh to worn) on September 10, 2008 (Alan Wormington); five (extremely fresh to worn) were recorded on the very late date of October 13, 1995 (Alan Wormington).

Larval Foodplants:

As stated by Opler & Krizek (1984: 105-106) ... “The larvae feed on flowers and fruits of an almost endless list of plants in many families.” Some of those likely to be utilized locally include vetches (*Vicia*), tick-trefoils (*Desmodium*) and clovers (*Trifolium*). On Point Pelee beaches, adults are regularly observed in association with Trailing Wild Bean (*Strophostyles helvola*); this rare Ontario species might well be the most frequently used foodplant in our area.

Subspecies:

The subspecies in the northern part of the Common Gray-Hairstreak's range, including Point Pelee, is *humuli*; additional subspecies are present in the west.

Marine Blue (*Leptotes marina*)

— Extremely Rare Immigrant and Seasonal Colonist —

The Marine Blue is a permanent resident of the southwestern U.S.A., occurring in deserts and other dry, open areas. Each summer the species may colonize areas far to the north and east, rarely reaching the U.S. Midwest (Scott 1986: 394; Opler 1992: 127) or even New York. Prior to the appearances in eastern North America during 1993 (including Ontario), the Marine Blue had been recorded no further east than Indiana, where a single individual was found in 1978 on the shore of Lake Michigan (Shull 1987: 157). At that time there were no known records for either Ohio (Iftner *et al.* 1992) or Michigan (Nielsen 1999).

In Canada the only prior record known is a single Marine Blue obtained at Glenside, Saskatchewan in 1939.

Wormington (1994a): The remarkable season of 1993 resulted in multiple records in northeastern North America; in chronological order these include western New York (Erie County) on July 25 (Robert F. Andrlé; see Gall & Andrlé 1994), south-central Ohio (Lawrence County) on August 15 (David K. Parshall; see Parshall 1993), and coastal New York. There are two interesting

aspects of the Point Pelee occurrences in 1993: (1) the initial immigrants appeared in mid-June, predating all other reported extralimital observations by a considerable margin; and (2) Point Pelee was apparently the only location in eastern North America where reproduction of the species was detected. However, it is unknown what brood of Marine Blue entered Ontario as immigrants, since the species flies all year in Mexico and some areas of the southern United States (*e.g.*, southern California and southern Texas). It is also difficult to hypothesize if the initial individuals arriving at Point Pelee had come directly from the southern United States, or are from a brood that was produced somewhere in transit.

Broods and Flight Period, 1993 — Ontario

Immigrant Brood:

June 16	1 worn female	West Beach	on Yellow Sweet Clover
June 17	1 ragged female	west side of Tip	on Yellow Sweet Clover
June 21	1 ragged female	West Beach	on Yellow Sweet Clover

First Subsequent Brood:

July 13	3 ex. fresh males	west side of Tip	perched and flying
July 18	1 not fresh male	West Beach	perched
July 18	1 ex. fresh male	west of Sparrow Field	on Catnip (<i>Nepeta cataria</i>)
July 19	1 fresh male	West Beach	flying
July 21	1 ex. fresh male	Sparrow Field	flying
July 22	1 ex. fresh male	White Pine Beach	on White Sweet Clover

Second Subsequent Brood:

August 26	4 not fresh (all male?)	West Beach	perched and flying
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Third Subsequent Brood:

September 19	1 ex. fresh male	east side of Tip	on goldenrod (<i>Solidago</i> sp.)
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Remarkably, in 1999 the species was found again at Point Pelee. On July 31 an extremely fresh male was found dead at DeLaurier Fields on White Sweet Clover, the victim of a Crab Spider (Jay Cossey). The extreme freshness of this individual strongly suggests that the species had arrived earlier in the season and reproduced at or near Point Pelee, perhaps similar to what transpired in 1993.

Larval Foodplants:

These include clover and other species of legumes (Fabaceae) according to Opler (1992: 127). During 1993, when the species colonized Point Pelee, White Sweet Clover (*Melilotus alba*) was the suspected larval foodplant; this plant is abundant in the areas where Marine Blue was found.

Subspecies:

The Marine Blue is monotypic, with no recognized subspecies.

Eastern Tailed-Blue (*Everes comyntas*)

— Common Permanent Resident —

Broods and Flight Period:

From the middle of May to early October. ***Early Dates:*** three (extremely fresh) on April 19, 2012 (Henrietta T. O'Neill); three (extremely fresh) on April 29, 2000 (Jerry S. Ball); one (fresh) on May 5, 1986 (Christopher M. Lemieux). ***Late Dates (all broods):*** one (fresh to worn male) on October 22-30, 2007 (Henrietta T. O'Neill); one (worn) on October 27, 2000 (Henrietta T. O'Neill); one (worn male) on October 25, 2015 (Alan Wormington).

Abundance:

...***Maximum Counts:*** 72 on October 3, 2006 (Henrietta T. O'Neill), which is also a remarkable count for so late in the season; 60 (fresh to worn) on August 27, 2010 (Alan Wormington, William G. Lamond, Kevin A. McLaughlin); 47 on August 7, 1999 (4th Annual Point Pelee Butterfly Count); and 34 (fresh to worn) on October 9, 1995 (Alan Wormington, Tim Sabo), another exceptional count for such a late date.

Larval Foodplants:

Numerous species of legumes (Fabaceae) are used (Scott 1986: 395-396); those utilized at Point Pelee could include tick-trefoils (*Desmodium*), vetchlings (*Lathyrus*), vetches (*Vicia*), various clovers (*Trifolium* and *Melilotus*) and Black Medic (*Medicago lupulina*).

Subspecies:

Nominate *comyntas* is the subspecies of most of North America, including Point Pelee.

Spring Azure (*Celastrina ladon*)

— Uncommon Permanent Resident —

Although this taxon was originally described by Cramer in 1780, the Spring Azure was not recognized as a species distinct from the Summer Azure until 1995 (Wright, 1995).

At Point Pelee the Spring Azure is usually found in heavily-wooded areas. Localities where it is encountered regularly include Post Woods, Woodland Nature Trail, Tilden's Woods and

DeLaurier Trail; within the park it has been found as far north as the area opposite The Dunes Picnic Area (old Camp Henry site); in the opposite direction, Spring Azure has been found regularly in the Tip area.

Broods and Flight Period:

There is a single brood, with a short flight season, from the middle of April (sometimes earlier) to early May (sometimes later). ***Early Dates:*** four (extremely fresh) on April 1, 1998 (Fred J. Urie); one (extremely fresh) on April 3, 2010 (Blake A. Mann); one (extremely fresh male) on April 5, 2000 (Henrietta T. O'Neill). ***Late Dates:*** three (worn) on May 18, 2001 (William G. Lamond, Alan Wormington); one (not fresh) on May 17, 1996 (Sean McMinn, Kevin A. McLaughlin *et al.*).

Abundance:

Despite the fact that the overall population is relatively small, the species is very conspicuous during its short flight period due to the fact that it flies early in the year when most vegetation is devoid of foliage. ***Maximum Counts:*** 74 (extremely fresh) on April 19, 2006 (Alan Wormington); 45 (fresh) on April 23, 2001 (Alan Wormington, Fred J. Urie); 25 on April 19, 1986 (Alan Wormington). The record-high count of 74 is exceptional, especially since all were tallied at just two locations — DeLaurier Trail and Tilden's Woods.

Larval Foodplants:

Due to the confusion of this species and Summer Azure, literature sources are difficult to interpret. An overview of available sources suggests that cherries (*Prunus*) are the preferred foodplant (*e.g.*, see Opler & Krizek 1984: 116-117; Scott 1986: 392-394); however, this will need to be verified by current researchers of the subject. Presumably, there are additional foodplants yet to be specified.

Subspecies:

Point Pelee populations are referable to nominate *ladon*, the subspecies of southern Ontario and the eastern United States (Ferris 1989: 32-33).

Summer Azure (*Celastrina neglecta*)

— Abundant Permanent Resident —

Broods and Flight Period:

Three complete broods, with a partial fourth. In 1998, a very early year, the start of the second brood was recorded on the very early date of July 2 (Alan Wormington); on this date an extremely fresh male was found at precisely the same spot on DeLaurier Trail where a record-early, first-brood individual was found on May 30 (33 days earlier). ***Early Dates:*** two (extremely fresh females) on May 30, 1995 (Alan Wormington); one (extremely fresh female) on May 30, 1998 (Henrietta T. O'Neill); one (fairly fresh male) on May 30, 2000 (Alan Wormington *et al.*). ***Late Dates:*** one (worn) on October 30, 1999 (Stephen T. Pike); one (fairly fresh female) on October 23, 1993 (Alan Wormington).

Abundance:

... ***Maximum Counts:*** 653 on August 10, 1996 (1st Annual Butterfly Count); 323 on June 19, 1999 (Fred J. Urie); 250 (fresh) on August 2, 1996 (Alan Wormington, Robert Curry); seven (extremely fresh) were recorded on the very early date of May 31, 1998 (Alan Wormington, Henrietta T. O'Neill, Fred J. Urie, Karl R. Konze), while 11 were recorded on the very late date of October 8, 1993 (Kevin A. McLaughlin).

Larval Foodplants:

David M. Wright (personal communication to the author) has suggested that dogwoods (*Cornus*), viburnums (*Viburnum*) and sumacs (*Rhus*) are probably utilized at Point Pelee, amongst others. Dogwoods are almost certainly used on a regular basis, as large numbers of Summer Azure are routinely found in association with stands of these shrubs.

On two different occasions this species has been observed egg-laying on Carpenter's Square (*Scrophularia marilandica*) — along Shuster Trail (Tilden's Woods) on August 27, 1993 (Alan Wormington) and the Visitor Centre septic field on August 8, 2001 (Alan Wormington *et al.*).

NOTE ON AZURES (Ross Layberry)

The above comments on the Spring and Summer Azures represent the state of knowledge before the publication of Schmidt and Layberry, 2016, which totally changed our understanding of the Azures in Ontario. We now know that three species of Azures are involved, probably all of them represented at Point Pelee. The statements regarding the Spring Azure are probably correct, as they refer to the earliest species to fly. But later broods there almost certainly comprise two species, the Summer Azure, as mentioned, and the Northern Spring Azure, each having at least two generations.

Silvery Blue (*Glaucopsyche lygdamus*)

— Extremely Rare Immigrant —
— Extremely Rare Temporary Resident? —

The origin of the Point Pelee occurrences is unknown ... The closest populations to Point Pelee are in southeastern Michigan (Nielsen 1999: 98-99) and northeastern Indiana (Shull 1987: 162-163). However, both Point Pelee individuals occurred on dates that are considerably later than is typical in adjacent areas, perhaps indicating that they originated from a more northerly location.

Since the two Point Pelee occurrences were during successive years, this strongly suggests that the species temporarily colonized Point Pelee; if so, such a hypothetical population must have been quite minuscule in size. Unfortunately the circumstances surrounding the two occurrences are either not known or were not recorded; if in fact both specimens were obtained at the same site within Point Pelee National Park, this would almost certainly imply that a temporary population was present.

Broods and Flight Period:

Throughout its range there is normally a single brood only, but on rare occasions a partial second brood has been reported. In regions adjacent to southwestern Ontario (Michigan and Indiana) the flight period is generally from late April to early June; further north (*e.g.*, Algonquin Provincial Park) the species flies from the middle of May to early July (Reynolds 1988).

Abundance:

In 1980, one (worn female) was collected sometime during the period of July 7-10 at an unknown location (J.D. Cashaback; specimen in GUE).

In 1981, one (fresh female) was recorded on June 20 (A. Richard Westwood; specimen in ONHP).

Larval Foodplants:

Potential foodplants are common at Point Pelee, but it is not known if the species has actually reproduced here. These include vetchlings (*Lathyrus*), vetches (*Vicia*), White Sweet Clover (*Melilotus alba*) and Alfalfa (*Medicago sativa*), all of which are in the legume (Fabaceae) family (see Scott 1986: 399-400).

Subspecies:

Formerly (see Wormington 1983) I considered the 1981 Point Pelee specimen as pertaining to nominate *lygdamus*, the subspecies of the Appalachian Mountain Region of the United States. However, examination of additional museum material and various literature sources clearly demonstrates that this specimen — and similarly the specimen collected in 1980 — as pertaining

to *couperi*, the widespread northern subspecies. The original confusion surrounding the 1981 specimen was probably due to the fact that populations of *couperi* that most closely resemble nominate *lygdamus* are found the farthest south (e.g., in southern Michigan and northern Indiana). In fact this assessment is well illustrated by the comments made by Nielsen (1999: 98-99), who states that “Some southern Michigan specimens, with large spots on the undersurface, resemble the more southern subspecies, *G. lygdamus lygdamus*.”

American Snout-Butterfly (*Libytheana carinenta*)

— Uncommon to Abundant Immigrant and Seasonal Colonist —
— Rare Temporary Resident —

Although generally considered as rare in Ontario, this distinctive (and rather peculiar) butterfly can be found regularly at Point Pelee due to the abundance of its larval foodplant. The first Point Pelee record was provided by Percy A. Taverner, who found the species during the summer of 1913 without providing specific observation dates (in Taverner 1914). When present, the species can be expected anywhere at Point Pelee where it is apt to be found nectaring on flowers or obtaining moisture from damp soil; in particular it favours the flowers of White Sweet Clover (*Melilotus alba*).

The first individuals found each year are often worn, and the first recorded date varies from year to year, indicating the American Snout-Butterfly is normally not a permanent resident at Point Pelee; instead, it is an annual immigrant and seasonal colonist. Reflecting this viewpoint, most authors clearly state that this species is not resident north of the coastal Carolinas and lower Mississippi River Valley (e.g., see Opler & Krizek 1984: 125-126; Scott 1986: 344-346). But despite the foregoing comments, the American Snout-Butterfly is probably an over-wintering resident at Point Pelee on rare occasions. This assumption is based on the observation of seven extremely fresh individuals on June 1, 1985 (Alan Wormington, Dennis F. Rupert, Donald A. Wilkes); this observation was record-early at the time and followed a year when the species was extremely abundant (see Wormington 1989: 9-10). It seems reasonable to assume that small numbers are indeed capable of surviving the winter following seasons when the species is extremely abundant, as was the case in 1984 (see Maximum Counts).

Broods and Flight Period:

Most years there are probably three broods at Point Pelee; however, the number of broods that are produced is undoubtedly influenced by the arrival date each season of the first immigrants.

Typically the species can be found from the middle of June (rarely late May or earlier) to early October (or later). **Early Dates:** six (fresh) on April 19, 2012 (Henrietta T. O'Neill); one (ragged) on April 27, 2013 (Gary R. Tetzlaff); one on May 13, 2000 (Jay Cossey). At Point Pelee the first immigrants are routinely recorded much earlier than elsewhere in the Great Lakes Region; for example, in adjacent states the earliest published dates are May 30 for Ohio (Iftner *et al.* 1992: 114) and June 10 for Michigan (Nielsen 1999: 106-107). **Late Dates:** one (fresh) on November 16, 2001 (Alan Wormington); one (not fresh) on November 14, 1989 (James N. Flynn, June M. Gordon); one on November 11, 2005 (Alan Wormington).

Abundance:

The abundance of American Snout-Butterfly can vary tremendously from year to year, but most years it is fairly common; the species tends to be most numerous during the month of August when several can be expected on a daily basis. Early in the season the species can be quite scarce (initial immigrants tend to be few in number), but the emergence of subsequent broods can increase the population dramatically. **Maximum Counts:** 800 (nectaring on White Sweet Clover) at the west side of the Tip on July 28, 1984 (Alan Wormington); 200 (most extremely fresh) on July 11, 1987 (Alan Wormington); 90 on July 27, 1986 (G. Tom Hince). Excluding the foregoing high counts, in no other year has more than 35 been recorded in a single day. Five (not fresh) immigrants on May 17, 1999 (Alan Wormington *et al.*) is a high count for so early in the season.

Larval Foodplants:

Various hackberries (*Celtis*) are used almost exclusively (Scott 1986: 344-346). Northern Hackberry (*Celtis occidentalis*) and Dwarf Hackberry (*Celtis tenuifolia*) are both present at Point Pelee (Jellicoe 1984: 9), but only the former species is common.

Subspecies:

The subspecies occurring at Point Pelee is *bachmanii*, the widespread subspecies of North America.

Variegated Fritillary (*Euptoieta claudia*)

— Rare to Uncommon Immigrant —

The Variegated Fritillary is a southern species that is a permanent resident north to South Carolina. Each year, however, the species advances northward where it is recorded almost

annually in southern Ontario. It is generally accepted that this species is not capable of overwintering in northern areas, including southern Ontario; however, Layberry *et al.* (1998: 167) describe a temporary colony that has persisted for several years near Quebec City. This species is never numerous in Ontario, even though the species occurs every year in small numbers.

The first Point Pelee record was on June 16, 1981, when two individuals were found (Alan Wormington; specimen in PPNP); during the same year, additional individuals were recorded until the middle of July. Since 1981 the species has become increasingly more regular at Point Pelee, with observations in 1984, 1987, 1990, 1991, 1992, 1995, 1997, 1998, 1999, 2000 and 2001.

Broods and Flight Period:

In southern Ontario the species has the potential to produce several broods each year, especially if the first immigrants arrive early in the season. Records for Point Pelee are scattered throughout the season. Excluding the earliest and latest known occurrences, recorded dates extend from late May to early October. ***Early Dates:*** one on April 20, 2012 (Henrietta T. O’Neill); one (ragged) on April 22, 2004 (Marianne B. Reid, Jeremy L. Hatt); one (fairly fresh) on April 30, 1990 (Kevin A. McLaughlin). ***Late Dates:*** one (not fresh) observed almost daily from October 27–November 9, 1999 (Henrietta T. O’Neill *et al.*); two on October 31, 2000 (Henrietta T. O’Neill).

Abundance:

Most sightings at Point Pelee pertain to single individuals, or small numbers. Rarely, however, there can be incursions of the species, when large numbers are present. ***Maximum Count:*** 51 (fresh) on May 13, 2000 (Alan Wormington *et al.*); three (extremely fresh) on May 22, 1987 (William G. Lamond, Kevin A. McLaughlin, Alan Wormington).

Larval Foodplants:

Although many unrelated plants are utilized (Opler & Krizek 1984: 130-131; Scott 1986: 335-336), there is no evidence that Variegated Fritillary has ever reproduced at Point Pelee. Potential larval foodplants include violets (*Viola*), plantains (*Plantago*), purslane (*Portulaca*), Moonseed (*Menispermum canadense*) and May-Apple (*Podophyllum peltatum*). Violets are probably utilized most often, but it should be noted that none of those specifically listed by Scott are found at Point Pelee (Jellicoe 1984: 15).

Subspecies:

The Variegated Fritillary is monotypic with no recognized subspecies.

Great Spangled Fritillary (*Speyeria cybele*)

— Uncommon to Common Immigrant —
— Rare Permanent Resident —

William W. Saunders and friends found it at Point Pelee during a visit on June 29-30, 1882 (see Saunders 1885). Percy A. Taverner found it common on August 13, 1909.

Point Pelee observations tend to be erratic with considerable year-to-year variation in the numbers observed. Furthermore, many observed individuals (even the first ones of the year) often show considerable wear, indicating they are immigrants to the area. Females of the species have been found on very few occasions, indicating that males are considerably more nomadic of the two sexes. It is unknown why Great Spangled Fritillary is apparently incapable of reproducing at Point Pelee on a regular basis, although it might do so. If the species does reproduce at Point Pelee, it does so quite infrequently and is not likely to be a permanent resident.

Broods and Flight Period:

There is just one brood with a long flight season. Although early and late individuals greatly extend the flight period, the majority are found from late June to early August. In addition to being more numerous, males collectively are on the wing much earlier than females; recorded dates for males at Point Pelee extend from June 15 to September 8, while females have been found from June 27 to September 15. ***Early Dates:*** one (fresh male) on June 15, 1991 (Robert Curry, Kirk W. Zufelt); one (extremely fresh male) on June 15, 1998 (Henrietta T. O'Neill); one (extremely fresh male) on June 15, 1999 (Henrietta T. O'Neill); one (extremely fresh male) on June 15, 2000 (Alan Wormington). ***Late Dates:*** one (worn female) on September 15, 2000 (Henrietta T. O'Neill) — up to and including this last sighting, several females were routinely present at a patch of Wild Bergamot (*Monarda fistulosa*) in a clearing in the middle section of the Woodland Nature Trail; one (ragged female) on September 11, 1994 (Alan Wormington, Tim Sabo).

Abundance:

There is tremendous year-to-year fluctuation in abundance; some years only a few individuals are recorded all season, while in other years (notably 1995, 1999 and 2000) many can be found. Some years, for example, 1996, the species has gone completely unrecorded. During the height of abundance (usually the first half of July), five to ten individuals can occasionally be found in a single day. ***Maximum Counts:*** 66 (65 extremely fresh to ragged males plus one extremely fresh female) on June 27, 2000 (Alan Wormington, Henrietta T. O'Neill *et al.*); 63 (61 extremely fresh to ragged males plus two extremely fresh females) on June 29, 1999 (Alan Wormington). A count

of eight (six fairly fresh females plus two ragged males) is exceptional for the late date of September 5, 2000 (Henrietta T. O'Neill).

Larval Foodplants:

Scott (1986: 325-326) lists several species of violets (*Viola*) that are larval foodplants, none of which have been recorded at Point Pelee (Jellicoe 1984: 15). Other authors simply state that violets are used, indicating that those species found at Point Pelee could be utilized. However, although violets are common at Point Pelee, they tend to dry out as the season progresses; this could be a limiting factor as to why Great Spangled Fritillary is such a scarce permanent resident here.

Subspecies:

There are numerous subspecies of Great Spangled Fritillary, but the one found at Point Pelee (and throughout the lower Great Lakes Region) is nominate *cybele*.

Aphrodite Fritillary (*Speyeria aphrodite*)

— Extremely Rare Immigrant —

The records of Aphrodite Fritillary at Point Pelee are quite unusual, as all pertain to nominate *aphrodite*, rather than subspecies *alcestris* which is a permanent resident in southwestern Ontario. Nominate *aphrodite* is normally found well south of Ontario; even in northern Ohio

Subspecies *alcestris*, which has not been recorded at Point Pelee, is found throughout much of southwestern Ontario but is rare in Essex County; resident populations closest to Point Pelee are present at the Ojibway Prairie complex in Windsor, about 50 km away. Formerly this subspecies was probably resident at nearby Leamington, since G. Stuart Walley collected a specimen there in 1931 (specimen in CNC).

Formerly (see Wormington 1983; 1989: 10) I considered Aphrodite Fritillary as a former resident at Point Pelee, based on the 1931 specimen. However, this status now seems doubtful for two main reasons: (1) the 1931 and two subsequent specimens obtained at Point Pelee all pertain to nominate *aphrodite*, which is not the subspecies found locally in southern Ontario as a permanent resident; and (2) the majority of observations of the related Great Spangled Fritillary at Point Pelee clearly pertain to immigrants.

Broods and Flight Period:

This species is single brooded with a long flight season. In adjacent areas (*e.g.*, southern Ontario, etc.) the flight period is generally from late June to late August; the three Point Pelee occurrences correspond to this time frame.

Abundance:

There are only three known occurrences for Point Pelee; single individuals were found in 1931, 1982 and 1995 as detailed below.

One (extremely fresh male) was collected by G. Stuart Walley on June 26, 1931 (specimen in CNC). During the same trip he collected two additional (male) specimens in nearby Leamington; one was also nominate *aphrodite*, but the other was subspecies *alcestris* (specimens in CNC).

A fresh male was found dead on the main park road at Northwest Beach on August 4, 1982 (Michael K. Matheson; specimen in ONHP). Theoretically this individual could have been killed anywhere by a vehicle and inadvertently dropped at Point Pelee; however, when found the specimen was still soft indicating it had met its demise shortly before its discovery.

One (not fresh male) was found at DeLaurier Fields on July 11, 1995 (Alan Wormington; specimen in ONHP); 1995 was an exceptional season for the related Great Spangled Fritillary at Point Pelee, indicating that this species and Aphrodite Fritillary were particularly nomadic that year.

Larval Foodplants:

Several violet (*Viola*) species are listed by Scott (1986: 324-325), but none of these are recorded for Point Pelee (Jellicoe 1984: 15). In any event, the subspecies of Aphrodite Fritillary that has been recorded here is not the same as the one which is resident in southwestern Ontario. Furthermore, only male individuals have been recorded at Point Pelee. Considering all of the preceding, reproduction at Point Pelee is, therefore, most unlikely.

Subspecies:

In eastern North America there are several subspecies of Aphrodite Fritillary, all of which are separated by some clinal gradation. Subspecies *alcestris* (of the U.S. Midwest) occurs from extreme northern Ohio (Iftner *et al.* 1992: 119) to southern Ontario along the north shore of Lake Erie, then west to Minnesota and northern Iowa (Howe 1975: 215-217). Found to the southeast, east and north of this area is nominate *aphrodite*.

All three Point Pelee specimens pertain to nominate *aphrodite* and although they could have originated from a northern area, they more likely originated from the south or southeast. In general, Aphrodite Fritillary is not very numerous to the north of our area, but it is abundant to the southeast in a region that includes unglaciated eastern Ohio and the Appalachian Mountains, etc. Furthermore, all three Point Pelee specimens are relatively small; as such they appear identical to specimens in the author's collection that were obtained in West Virginia, but appear dissimilar to the somewhat larger specimens that were obtained in central Ontario.

Regal Fritillary (*Speyeria idalia*)

— Extremely Rare Immigrant —

Although the species has always been considered scarce in Michigan, it has been recorded in numerous counties in the southern half of the Lower Peninsula (Nielsen 1999: 113-114).

Until 2000, the last Regal Fritillary reported in Ontario was at Point Pelee in the mid-1970s (in either 1975 or 1976). One individual was extensively described at Holiday Beach Conservation Area, Essex County, on October 2, 2000 (see Applebaum 2000; Anonymous 2001b). Another relatively recent occurrence in Ontario was an individual collected at Rondeau Provincial Park, *Chatham–Kent* on July 28, 1963 (John B. Walty; specimen in ROM). It is of interest that the last three known occurrences in Ontario all pertain to obvious strays, and all occurred in extreme southwestern Ontario on the shores of Lake Erie.

Historically the species was recorded a number of times at Windsor, around 1895. Although this endangered species might never be found in Ontario again, the recent occurrence at Holiday Beach indicates that the species could occur again at Point Pelee; July and August would be the expected months of occurrence.

Broods and Flight Period:

Abundance:

There is one reported occurrence of this species at Point Pelee (see Stewart 1977: 88); unfortunately I have been unable to locate any specific details on this record, even though a specimen was apparently collected. It is probable that the record pertains to either 1975 or 1976, as it is known that the observer (Darryl Stewart) visited Point Pelee during these years. If the specifics of this record can be obtained, it will represent one of the last known occurrences of Regal Fritillary in Ontario.

Larval Foodplants: As in other greater fritillaries, the larval foodplants are violets, probably various species of prairie violets.

Subspecies: There are no subspecies.

Meadow Fritillary (*Boloria bellona*)

— **Extremely Rare Immigrant** —

It is still locally common at Windsor, and it is probable that small colonies exist elsewhere in Essex County. Despite these nearby populations, the Point Pelee individuals probably originated from much further afield; for example, the species is also found throughout southern Michigan (Nielsen 1999: 119-120) and northern Ohio (Iftner *et al.* 1992: 122-123).

Broods and Flight Period:

At our latitude there are usually three broods, typically flying from early May to mid-June, late June to late July, and mid-August to late September. The two Point Pelee individuals were likely derived from the second and third broods, respectively, of the species.

Abundance:

There are only two known records for Point Pelee; single individuals were found in both 1988 and 1993 as detailed below.

The first record was of one, not fresh, found at the middle section of the Woodland Nature Trail on June 25, 1988 (Alan Wormington, James Kamstra; specimen in ONHP); when encountered this individual was flying north, perhaps indicating that it was actively migrating.

One worn specimen was found at the Visitor Centre septic field on September 19, 1993 (Alan Wormington; specimen in ONHP); when discovered this individual was nectaring on goldenrod (*Solidago*).

Larval Foodplants:

It is unlikely that this species has ever reproduced at Point Pelee, even though suitable foodplants are probably present. Some authors simply state that various violets (*Viola*) are used, while other authors are more specific; of those species listed by Opler & Krizek (1984: 138) and Scott (1986: 320-321), only Wood Violet (*Viola sororia*) is found at Point Pelee (Jellicoe 1984: 15).

Subspecies:

The two Point Pelee specimens are nominate *bellona*, the widespread subspecies of the Great Lakes Region (see Howe 1975: 247).

Silvery Checkerspot (*Chlosyne nycteis*)

— Former Resident (Extirpated) —
— Extremely Rare Immigrant —

There have been many reports from the Windsor area of Essex County, 1980 to 2012 and it is also found throughout southern Michigan (Nielsen 1999: 124-125). Point Pelee records are for a single year only, so it is therefore impossible to speculate as to whether the resident population here was permanent or temporary.

Layberry *et al.* (1998: 185) indicate, unfortunately, that Silvery Checkerspot was present at Point Pelee in 1987 based on an observation that was published in Hess (1988: 51); however, the report of this species was based on a sight record that is not considered valid.

Broods and Flight Period:

... start

Abundance:

There are just three records from Point Pelee, the earliest three (extremely fresh) on July 8, 1927 (F.P. Ide; specimens in CNC) Single strays were recorded in an unknown year, and in 2012: one (ragged) at the Visitor Centre in June, 2012 (John Brownlie, Rhonda N. Donley).

Larval Foodplants:

Numerous plants in the composite (Asteraceae) family are used (Scott 1986: 304); those found at Point Pelee that may have been utilized in the past include asters (*Aster*), sunflowers (*Helianthus*) or Brown-eyed Susan (*Rudbeckia hirta*).

Subspecies:

Point Pelee and most of eastern North America is represented by *nycteis*, the nominate subspecies.

General Notes on the three crescent species (Alan Wormington)

Collectively, the three species of crescents found at Point Pelee (and southern Ontario) can be referred to as "pearl crescents". Hundreds of museum specimens have been examined; curiously all appear to pertain to Orange Crescent.

Some additional data pertaining to Point Pelee appears as follows, but does not pertain to any particular species:

Late Dates: one (worn female) on November 5, 1999 (Henrietta T. O'Neill) — this individual was tentatively identified as Summer Crescent; one (extremely fresh male) on October 25, 1996 (Alan Wormington) — the general appearance of this individual also suggested Summer Crescent.

Maximum Counts: 80 (extremely fresh to worn) on July 11, 1987 (Alan Wormington); 60 (fresh to worn) on August 15, 1994 (Alan Wormington); nine (fresh to worn) were recorded on the very late date of October 17, 1991 (Alan Wormington).

Further notes on crescents (Ross Layberry)

As far as I know, no further research has been done on Alan's three species of crescents. His Orange Crescent, *Phyciodes cocyta*, is probably the Northern Crescent, known elsewhere. But the Summer and Early Crescents require some serious work to understand Alan's thinking.

Summer Crescent (*Phyciodes tharos*)

— Common Permanent Resident —

1 fresh 4 Sept. 1960 Richard W. Holzman specimen in PPNP

large and yellowish, may not be Summer Crescent

Broods and Flight Period:

... it appears that there are only two broods of this species at Point Pelee, although a few late individuals may be part of a very rudimentary (partial) third brood. Adults are on the wing from early July to early August (first brood) and late August to early (occasionally middle of) October (second brood); it is possible that some of the very latest individuals in October are part of a very weak (partial) third brood. ***Early Dates:*** one (extremely fresh male) on June 23, 1991 (Alan Wormington); one (extremely fresh male) on June 23, 1998 (Alan Wormington). ***Late Date:*** one (ragged female) on October 23, 1995 (Alan Wormington).

Abundance:

... ***Maximum Counts:*** 35 (fresh) on August 30, 1997 (Alan Wormington); 30 (fresh to worn) on August 6, 1995 (Alan Wormington *et al.*); 12 (fresh to worn) were recorded on the very late date of October 13, 1995 (Alan Wormington).

Larval Foodplants:

Various asters (*Aster*) are the undoubted foodplants, but due to the confusion with Early Crescent, it is not known what species are used at Point Pelee.

Early Crescent (*Phyciodes "euclea"*)

— **Rare to Uncommon Immigrant and Temporary Resident** —

In southern Ontario this species appears to be limited to slightly drier sites than the other crescents, in such places as alvars, dunes, old fields, etc. In contrast, the other two common crescents in southern Ontario can be found just about anywhere.

It is possible that Early Crescent is a recent arrival to Point Pelee and its status here may still be a bit tenuous. For example, in my original publication on the butterflies of Point Pelee (Wormington 1983), I list the earliest crescent record as May 19 (which corresponds almost precisely to May 20 as the earliest, positive record of Orange Crescent supported by a specimen). With emergence dates earlier than May 19 entirely lacking prior to 1985, one can deduce that Early Crescent was formerly probably absent (or certainly at least rare) at Point Pelee. Since the 1983 publication, however, dates earlier than May 19 have been recorded almost annually; and, presumably, all of these pertain to Early Crescent.

The first record of an “early” crescent at Point Pelee was of one (extremely fresh) on May 11, 1985 (Alan Wormington); this observation almost certainly pertains to Early Crescent and, as such, is considered the first definite record of this species for Point Pelee. In the hope of discovering any earlier records for Point Pelee, numerous collections in various museums and institutions, etc.,

were examined for this species; however, no such specimens were found.

The status of this species at Point Pelee remains uncertain. For example, the species was common in 1995, but in other recent years has been quite scarce. Within Point Pelee National Park the distribution of this species is more restricted than the other two crescents, which are found uniformly throughout the area. The Early Crescent, however, is more often encountered along the west beaches of Point Pelee — particularly the area of Pioneer Beach to Northwest Beach — and elsewhere is encountered much less frequently; this might imply that the larval foodplant is a species of Aster that is somewhat restricted in its distribution within Point Pelee National Park.

Broods and Flight Period:

There are clearly three broods and individuals of second and third broods may overlap. The species flies from the middle of May to early June (first brood), middle of July to late August (second brood) and late August to early October (third brood). ***Early Dates (first brood):*** one (fresh) on May 5, 1999 (Fred J. Urie); one (fresh) on May 5, 2000 (Jerry S. Ball). ***Late Date (first brood):*** June 10. ***Early Date (subsequent broods):*** one (extremely fresh male) on June 30, 1999 (Alan Wormington). ***Late Dates (all broods):*** one (fairly fresh male) on November 5-6, 2000 (Dean J. Ware). Another very late individual was recorded the same year, on October 26-27 (Henrietta T. O'Neill).

Abundance:

... in 1995 the species was exceptionally numerous, but during other recent years it has been very scarce; since it is only recently that the species has been determined to be present at Point Pelee, more time is needed to determine its true status here. ***Maximum Counts:*** 46 (extremely fresh to ragged) on May 26, 1995 (Alan Wormington) — it is possible that some of these (less than ten individuals) were Orange Crescents; 45 (extremely fresh) on August 30, 1995 (Alan Wormington) — again, a few of these individuals may refer to one of the other two crescent species; 38 (extremely fresh) is an exceptional count for the early date of May 7, 2000 (Alan Wormington, William G. Lamond, Kevin A. McLaughlin, S. Bruce Kellett).

Larval Foodplants:

Asters (*Aster*) are the presumed foodplants, but it is not known what species are used at Point Pelee; most literature sources are impossible to interpret, since the present species and Summer Crescent are not recognized as distinct.

Subspecies:

Presumably the species is monotypic, but further research throughout the range of Early Crescent may reveal distinct populations.

Orange Crescent (*Phyciodes cocyta*)

— **Common Permanent Resident** —

In regions surrounding Point Pelee, Orange Crescent is either mostly absent or has been overlooked due to confusion with other crescent species. For example, for Michigan the species is not mapped for the majority of counties in the southern half of the Lower Peninsula (Nielsen 1999: 128-129) and in Ohio . . .

Based on the date of observation, Orange Crescent was undoubtedly the species seen by William W. Saunders on June 30, 1882 (Saunders 1885); as such it represents the first known record for Point Pelee. Percy A. Taverner found "it to be common on August 16, 1909

Broods and Flight Period:

... three broods, but the third is partial only. General flight periods are late May to the middle of July (first brood), early August to early October (second brood) and early to the middle of October (partial third brood); each year, late second-brood individuals are still present when early third-brood individuals are just starting to emerge. Although the first brood does not normally emerge until late May, during several recent years that have been very advanced the species has been seen in mid-May. ***Early Dates:*** one (not fresh female) on May 8, 1999 (Alan Wormington); one (extremely fresh) on May 12, 1998 (William G. Lamond *et al.*); one (extremely fresh male) on May 17, 2000 (Alan Wormington); one (extremely fresh female) on May 20, 1995 (Alan Wormington). The worn condition of the first individual seen in 1999 indicates that it must have originated from the south of Ontario (other southern species were also appearing at Point Pelee at the same time). ***Late Dates:*** five (worn) on October 19, 2010 (Alan Wormington, Henrietta T. O'Neill); one (fresh female) on October 19, 1995 (Alan Wormington).

Abundance:

... 10 to 20 (or more) per day can be considered typical counts ... ***Maximum Count:*** 350 (fresh to worn) on August 27, 2010 (Alan Wormington, William G. Lamond, Kevin A. McLaughlin); 336 on August 8, 1998 (xth Annual Butterfly Count); 40 (fresh to worn) on October 8, 2010 (Alan Wormington, William G. Lamond, Kevin A. McLaughlin) is a very high count for so late in the season.

Larval Foodplants:

Opler (1992: 170) simply states that asters (*Aster*) are the larval foodplants; however, none of those specifically listed by Scott (1986: 309-311) are found at Point Pelee (Jellicoe 1984: 18-19).

Therefore, it is not known what species may be utilized here. However, it should be noted that the species is common and widespread not only within Point Pelee National Park, but also throughout Essex County to the north; this would imply that common aster species are utilized as larval foodplants.

Baltimore Checkerspot (*Euphydryas phaeton*)

— Extremely Rare Immigrant —

Found throughout southern Michigan (Nielsen 1999: 131-132). A thriving colony now exists at the Ojibway Prairie Nature Reserve (Windsor), where the maximum count of four individuals was recorded on June 7, 1988 (Fred J. Urie). The species was first recorded in Windsor (Springarden Prairie) by John E. Pilkington on June 25, 1983; however, he made an incorrect statement (in Hess 1984: 49) that this was the first record for Essex County, but in fact the species had previously been recorded at Point Pelee in 1931.

There are only four known occurrences at Point Pelee. Formerly I considered the Baltimore Checkerspot to be a former resident at Point Pelee (see Wormington 1983; 1989: 110); however, with the more recent 1994 and 1999 occurrences, which pertain to obvious strays, it now seems probable that the earlier (1931) record likewise pertained to a stray individual as well (and in fact 1931 was a notable year for several immigrant species). Historically there perhaps may have been suitable habitat present at Point Pelee (*i.e.*, extensive wet meadows), but today such habitat is certainly absent.

Broods and Flight Period:

... start

Abundance:

There are only four known records for Point Pelee, all of which pertain to stray individuals as detailed below.

One (fresh male) was obtained on July 9, 1931 (G. Stuart Walley; specimen in CNC)

One (not fresh) was encountered at West Beach on June 30, 1994 (Alan Wormington; specimen in ONHP).

One (not fresh female) was found at the Visitor Centre on the very early date of June 10, 1999 (Alan Wormington). The very early date, in combination with the fact that the specimen was not fresh, almost certainly indicates that this individual was a stray. Likely this Baltimore originated from well south of Ontario.

Larval Foodplants:

It is unlikely that Baltimore Checkerspot has ever reproduced at Point Pelee, at least in modern times. Turtlehead (*Chelone glabra*) is used almost exclusively for egg-laying and by small larvae; after the winter diapause, larvae then switch to a variety of other plants as described by Iftner *et*

al. (1992: 126-127). In any event, Turtlehead has been recorded at Point Pelee only as an unconfirmed sight record (Jellicoe 1984: 17); historically, this larval foodplant could have been present along the edges of the Pelee Marsh before agricultural practices severely altered this area.

Subspecies:

Over most of North America (including Point Pelee) populations are referable to nominate *phaeton*.

Question Mark (*Polygona interrogationis*)

— **Common Immigrant and Seasonal Colonist** —

Various literature sources include conflicting information regarding the resident versus immigrant status of Question Mark in Ontario (and other northern areas). In Michigan, for example, Nielsen (1999: 132-133) implies that the species over-winters in the state, but does include a comment that more field observations are needed on this subject. Most field observers fail to notice that the last individuals they see each year in late fall are of the “light” winter form, whereas those seen in spring are always the “dark” summer form (and usually not in fresh condition either). These dark summer forms are migrants from much further south. An observation of the light “winter” form would be necessary to confirm that the species has over-wintered at Point Pelee or elsewhere in southern Ontario, and this has been confirmed only very rarely (see below

Broods and Flight Period:

Technically the species does not normally over-winter *per se*, as the species flies continuously throughout the year in the southern United States; it is from such populations that immigrants arrive in Ontario ... The dark “summer” form can usually be found until well into August, overlapping with the light “winter” form which usually appears by early August and flies until late September. One (extremely fresh) on July 21, 1985 (Alan Wormington) and another (extremely fresh) on July 24, 2001 (Henrietta T. O’Neill) are both very early. ***Early Dates (over-wintered):*** Only twice has Question Mark been recorded as over-wintering at Point Pelee, and this also represents the first such record for Ontario. This is based on three observations in 2012, as follows: one at White Pine Picnic Area on March 14 (Alan Wormington); one south of the Sparrow Field on March 17 (Brandon R. Holden); and one (fresh) on March 20 at Tilden’s Woods (Alan Wormington). All of these pertained to the expected (light) winter-form. These observations followed an exceptional winter which was both short and unusually mild, with little snow cover. These represent the only records of over-wintering anywhere in Ontario, with the exception of a single record at Malden Park, Windsor on April 20, 2012 (Ian Woodfield). ***Early Dates (first immigrants):*** 70 dark form on April 16, 2012 (Alan Wormington); one on April 16, 1976 (John

E. Pilkington); two (fresh) on April 23, 2001 (Alan Wormington). **Late Dates:** one (fresh) on November 23, 1999 (Henrietta T. O'Neill) one (fresh "light" form) on November 15, 1990 (Alan Wormington *et al.*).

I recorded a light-form individual on July 11, 2010 (Alan Wormington, Ken Newman), see summary I published in *The Egret* for a hike that I led that day.

Abundance:

... **Maximum Counts:** 100+ on May 13, 1985 (J. Donald Lafontaine); 85 (extremely fresh "dark" form) on July 19, 1996 (Alan Wormington); three (fresh) were recorded on the very late date of November 22, 1999 (Henrietta T. O'Neill).

Larval Foodplants:

Elms (*Ulmus*), hackberries (*Celtis*) and nettles (Urticaceae) are larval foodplants (Scott 1986: 284), all undoubtedly used in our area. The extensive stands of Northern Hackberry (*Celtis occidentalis*) at Point Pelee is undoubtedly the main reason why the Question Mark is so common here.

Subspecies:

Throughout its range the Question Mark is monotypic, with no recognized subspecies.

Eastern Comma (*Polytonia comma*)

— Common Permanent Resident —

Light individuals have been recorded from as early as July 31 (2001), August 1 (1998) and August 3 (2000), while dark individuals have been recorded as late as October 2 (1994), September 20 (1987), September 4 (1995).

Broods and Flight Period:

The timing of the first brood is highly variable, as it is wholly dependent on suitable weather. . **Early Dates (over-wintered):** one (fresh) on February 22, 1998 (Fred J. Urie); in years other than 1998, the earliest to be recorded is one on March 8, 1987 (G. Tom Hince, Gary M. Allen) and five (worn) on March 8, 2000 (Henrietta T. O'Neill). **Late Dates (over-wintered):** one on May 23, 2010 (Robert J. Yukich, Karen J. Yukich); one (ragged) on May 21, 1999 (William G. Lamond, Robert Z. Dobos, Barbara N. Charlton, Kevin A. McLaughlin). **Early Dates (new brood):** two (extremely fresh) on June 1, 1991 (Alan Wormington); one (extremely fresh) on June 2, 1995 (Alan Wormington, Russell M. Eynon). **Late Dates (pre over-wintering):** one (ragged) on

December 13, 1998 (Alan Wormington); one on December 10, 2006 (Ross M. Mackintosh, Sandra G. Mackintosh); one (fresh) on December 9, 1999 (Alan Wormington).

Abundance:

... **Maximum Counts:** 48 (fresh) on June 19, 2000 (Fred J. Urie); 38 on June 29, 1999 (Fred J. Urie); 25 (fresh to worn) at maple sap on April 6, 1991 (Alan Wormington); 12 (fresh) were recorded on the very early date of March 7, 1998 (Fred J. Urie, Alan Wormington *et al.*), while 12 (fresh) were found on the late date of November 13, 1989 (Alan Wormington).

Larval Foodplants:

Various nettles (Urticaceae), elms (*Ulmus*) and hops (*Humulus*) are utilized (Opler & Krizek 1984: 151-152); members of all of these plant groups are found at Point Pelee (Jellicoe 1984: 9).

Subspecies:

There are no recognized subspecies of Eastern Comma, as it is monotypic throughout its range.

Gray Comma (*Polytonia progne*)

— Rare Immigrant and Temporary Resident —

There were three records in Kent and Essex Counties during 1986, all of the dark summer form, including two captured at Point Pelee on July 20 and August 4 (Wormington 1987a). The species has been recorded very infrequently in southwestern Ontario, but this is undoubtedly due to it being overlooked.

Before that, one fairly fresh “dark” male was reported from Point Pelee, on July 6, 1927 (F.P. Ide; specimen in CNC); there have been subsequent records in 1991, 1992, 1998, 1999, 2000 and 2001.

Broods and Flight Period:

... **Early Date (over-wintered):** one (fresh) on April 13, 2001 (Stephen T. Pike, Dean J. Ware *et al.*). **Late Date (over-wintered):** one on May 14, 1998 (John R. Carley). **Early Date (new brood):** one (extremely fresh female) on June 20, 2000 (Henrietta T. O’Neill, Alan Wormington). **Late Dates (pre over-wintering):** one (extremely fresh) on November 8, 2002 (Robert L. Waldhuber, Alan Wormington, Kevin A. McLaughlin); one (extremely fresh) on October 31, 2001 (Alan Wormington, James N. Flynn, June M. Gordon).

Abundance:

Maximum Count: five (extremely fresh) on October 20, 2001 (Alan Wormington); two (extremely fresh) on October 3, 2000 (Alan Wormington, Kevin A. McLaughlin, Robert L.

Waldhuber).

Larval Foodplants:

According to most authors (e.g., see Opler 1992: 176-177), preferred foodplants are gooseberries (*Ribes*). Only Wild Black Currant (*Ribes americanum*) and Prickly Gooseberry (*Ribes cynosbati*) are found at Point Pelee (Jellicoe 1984: 12); presumably one or both of these plants are utilized here. Elms (*Ulmus*) are considered dubious by Scott (1986: 287-288) or are used only rarely according to Opler & Krizek (1984: 154-155).

Subspecies:

Nominate *progne* is the subspecies found throughout eastern North America, including Point Pelee.

Compton Tortoise-Shell (*Nymphalis vaualbum*)

— Rare Immigrant and Temporary Resident —

This is a northern, boreal species. However, in the fall the species sometimes wanders southward and temporary colonization may occur. The species was first recorded at Point Pelee on July 25, 1976, when a single (fresh) individual was collected (Paul R. Heels; specimen in GUE). In the 25 years from 1976 to 2001 the species has been recorded on 16 separate occasions, all involving single individuals in 1986, 1988, 1989, 1990, 1993, 1995, 1998, 1999, 2001. An analysis of records indicates that individuals arrive in the fall, over-winter, then lay eggs; extremely fresh (newly emerged) individuals have been recorded at Point Pelee as early as June 20 (1999) and June 22 (1998), a little earlier than reported elsewhere in Ontario. Why such temporary colonizations do not persist at Point Pelee is unknown; certainly the availability of larval foodplants here is not a limiting factor, since these are present in abundance.

On September 30, 2001, Robert Curry saw a Compton Tortoise-Shell that was flying south over the extreme Tip; it was seen on a day when Mourning Cloaks were unusually common, indicating active migration by both species.

1 fresh	July 25, 1976		Paul R. Heels, specimen in GUE
1	April 12, 1986		John E. Pilkington, Carol Kopchuk
1 worn	October 7, 1986		Jeffrey L. Larson
1 not fresh	August 7, 1988		Alan Wormington
1 fresh	August 21, 1989		Alan Wormington
1 worn	Sept. 11, 1989		Alan Wormington
1 fresh	July 1, 1990	Shuster Trail E	WGL + AW + KAM;
1 ex. fresh	July 2, 1990	Shuster Trail E	DGC + AW
1 (dead)	April 24, 1993	Tip shelter	Alan Wormington
1	April 24, 1995	Visitor Centre	G. Tom Hince, Ethan J. Meleg

1	August 7, 1995	West Beach	JLL + MVP + NVP
1 fresh	Sept. 24, 1995	west side of Tip	Alan J. Ryff
1 ex. fresh	June 22, 1998	NE Campground	Henrietta T. O'Neill <i>et al.</i>
1 ex. fresh_	June 20, 1999	West Beach	Alan Wormington <i>et al.</i>
2 ex. fresh	Sept. 29, 2001		Alan Wormington <i>et al.</i>
1	Sept. 30, 2001	flying S over Tip	Robert Curry

Broods and Flight Period:

... **Early Date (over-wintered):** one on April 12, 1986 (John E. Pilkington, Carol Kopchuk).

Late Date (over-wintered): one on April 24, 1995 (G. Tom Hince, Ethan J. Meleg). **Early Dates**

(new brood): one (extremely fresh female) on June 20, 1999 (Alan Wormington *et al.*); one (extremely fresh) on June 22, 1998 (Henrietta T. O'Neill *et al.*). **Late Date (pre over-wintering):** one (worn) on October 7, 1986 (Jeffrey L. Larson).

Abundance:

In total only 17 individuals have been recorded at Point Pelee, since the first one found in 1976; all observations pertain to single individuals only, except for two (extremely fresh) that were recorded on September 29, 2001 (Alan Wormington *et al.*).

Larval Foodplants:

Willows (*Salix*), poplars (*Populus*) and some birches (*Betula*) are the stated foodplants of most authors (*e.g.*, Opler & Krizek 1984: 155-156). Numerous willows and poplars are common at Point Pelee, and are the probable larval foodplants here.

Subspecies:

North American populations are subspecies *j-album*, but there is confusion over the correct species name, *vaualbum* or *l-album*;

Mourning Cloak (*Nymphalis antiopa*)

— Common Permanent Resident —

John E. Pilkington (in Hess 1981: 54) describes an interesting observation at Point Pelee on May 3, 1980, when a Mourning Cloak was caught in flight by a Great Crested Flycatcher; upon landing on a nearby branch, the bird pounded the butterfly against the branch about 20 times before swallowing it whole, wings and all.

May be somewhat migratory (see Maximum Counts).

Broods and Flight Period:

The species has one of the longest flight periods of any butterfly at Point Pelee, flying from late

March to late October, occasionally earlier and later. It also has one of the longest life spans of any species, perhaps exceeded only by the Monarch; individuals that go into hibernation in October often survive to the middle of May, a period of eight months. Close monitoring of larvae populations would provide a better understanding of the number of broods that occur each season. **Early Dates (over-wintered):** one on February 28, 2000 (Joseph E. Faggan); three on March 14, 1990 (Donald G. Cecile, Johanne Ranger, Steve Charbonneau). **Late Dates (over-wintered):** three (ragged) on May 21, 1999 (Alan Wormington, William G. Lamond *et al.*); one (ragged) on May 15, 1995 (Alan Wormington, Robert Z. Dobos, Kevin A. McLaughlin). **Early Dates (new brood):** one (extremely fresh) on May 17, 1998 (William G. Lamond, Alan Wormington); two (extremely fresh) on May 7, 2000 (Alan Wormington, William G. Lamond, Kevin A. McLaughlin, S. Bruce Kellett). Subsequent to this observation, in 2000, a very early year, there were numerous observations of additional individuals that were also in extremely fresh condition; could these be immigrants?

Late Dates (pre over-wintering): one on November 16, 1994 (Jonathan M. Simms); one (worn) on November 13, 1989 (Alan Wormington).

Abundance: Although the species is encountered regularly throughout the season, typically only one or two individuals are likely to be seen per day; **Maximum Counts:** 44 (fresh) on September 18, 1999 (Stephen T. Pike, Alan Wormington); 20 (extremely fresh) on June 15, 2000 (Henrietta T. O'Neill, Alan Wormington); 15 (fairly fresh) on June 10, 1982 (Alan Wormington). Regarding the 44 on September 18, 1999, there were very few present the day before or the day after at the same location; this may indicate a migratory movement, which apparently occurs regularly on the east coast of the U.S., but is rarely described in the Great Lakes Region.

Larval Foodplants:

Although Scott (1986: 291) lists numerous foodplants, most of which are various trees, the list of preferred species is considerably fewer according to Opler & Krizek (1984: 156-157). Those found at Point Pelee include willows (*Salix*), poplars (*Populus*), elms (*Ulmus*) and Northern Hackberry (*Celtis occidentalis*).

Subspecies:

Populations at Point Pelee are nominate *antiopa*, the widespread subspecies of most of North America.

Note: Subspecies *antiopa* is now known to be confined to the Old World; resident Canadian populations are subspecies *hyperborea* (Seitz). (Ross Layberry)

Milbert's Tortoise-Shell (*Nymphalis milberti*)

— Rare Immigrant and Temporary Resident —

Broods and Flight Period:

Throughout southern Ontario this species is on the wing until October or even later. For a time the latest recorded observation at Point Pelee was only on September 5, but in 2005 one was found on September 25. However, since the species overwinters as an adult, even later dates are to be expected. **Early Dates (over-wintered):** one on March 10, 1974 (John E. Pilkington); one (fresh) on March 25, 1995 (Anne Hanft, Sol Hanft, Carol Kopchuck). **Late Date (over-wintered):** one () on April 16, 1983 (AW?) – April 15 (1) at North Dike Road by Mike Matheson (in TEA) . **Early Dates (new brood):** one (extremely fresh) on May 25, 2012 (William G. Lamond, Alan Wormington, Kevin A. McLaughlin); one (not fresh) on May 26, 1985 (Alan Wormington); one (fresh) on June 1, 2000 (Henrietta T. O'Neill). **Late Dates (pre over-wintering):** one (extremely fresh) on September 25, 2005 (Alan Wormington); one (extremely fresh) on September 5, 1997 (Alan Wormington).

Abundance:

This showy species is rarely encountered at Point Pelee; most sightings pertain to single individuals only. **Maximum Count:** three (fresh) on August 7, 1988 (Alan Wormington).

Larval Foodplants:

This species feeds exclusively on nettles (Urticaceae) and perhaps only those in the genus *Urtica* as suggested by Scott (1986: 289). Stinging Nettle (*Urtica dioica*) is common at Point Pelee and is the likely host, assuming that Milbert's Tortoise-Shell does indeed reproduce here.

Subspecies:

Nominate *milberti* is the subspecies present at Point Pelee and throughout the Great Lakes area.

American Painted-Lady (*Vanessa virginiensis*)

— Uncommon to Common Immigrant and Seasonal Colonist —

Some authors indicate that American Painted-Lady is a permanent resident in southern Ontario, but evidence for over-wintering is entirely lacking. The date on which the species is first recorded each year can vary by several weeks or more, a pattern which is typical for species that are strictly immigrants to our area. Furthermore, the last individuals in fall are typically large and brightly-colored, whereas those in spring are small and often in worn condition.

Of the early naturalists, only William W. Saunders mentions the occurrence of American Painted-Lady at Point Pelee; he recorded the species during his visit here on June 29-30, 1882 (see Saunders 1885).

This very adaptable species is found throughout the park wherever there are nectar sources.

The American Painted-Lady can be highly nomadic; at a single locality the species may be common one day and then may seem to be completely absent the next.

Broods and Flight Period:

The arrival date of initial immigrants can vary considerably from year to year (late March to the middle of May), but most years the species is present by the end of April. Spring immigrants tend to be small in size, drab in appearance, and are often worn; these individuals continue to pass through our area until at least the middle of June. Individuals of the first locally-produced brood (to be expected about 45 days after the arrival of the first immigrants) are characterized by their larger size, bright colouration, and immaculate condition; this first brood has been recorded as early as May 17 in 1998 (Alan Wormington, Stephen T. Pike) and May 26 in 1995 (Alan Wormington). During most years the species flies continuously through the season to the middle of October. Three broods are produced locally each year, possibly four broods during years when the species has arrived very early in the season. ***Early Dates:*** one (fresh, very small) on March 14, 2012 (Robert J. Cermak, Alan Wormington) is exceptionally early; it was seen at the extreme Tip and was thought to have just arrived from flying across Lake Erie; one on March 30, 1986 (Christopher M. Lemieux); one (fresh) on March 30, 1998 (Alan Wormington). ***Late Dates:*** one (extremely fresh) on November 9, 2007 (Alan Wormington); one on November 5, 2000 (Fred J. Urie); one (fresh) on November 1, 1990 (Alan Wormington)

Abundance:

From year to year the abundance of this species can fluctuate considerably, but most years it is common; during some years, however, the species can be virtually absent. Numbers can be found throughout the season, but often the highest counts pertain to spring immigrants that are present in April and May. ***Maximum Counts:*** 900 on April 23, 2001 (Alan Wormington, Fred J. Urie, Henrietta T. O'Neill *et al.*); 60 on April 28, 1985 (G. Tom Hince, Linda Guzman); 50 on May 13, 1985 (J. Donald Lafontaine); 47 on May 17, 1986 (Ben Kulon, Brenda Kulon).

Larval Foodplants:

Many hosts have been published, which are members of the composite (Asteraceae), mallow (Malvaceae) and nettle (Urticaceae) families, amongst others (Scott 1986: 283). Composites are preferred, and known foodplants that are found at Point Pelee (Jellicoe 1984: 18-20) include Sweet Everlasting (*Gnaphalium obtusifolium*), Pussytoes (*Antennaria neodioica*), Pearly Everlasting (*Anaphalis margaritacea*), Dark-leaved Mugwort (*Artemisia ludoviciana*), Canada Thistle

(*Cirsium arvense*) and various sunflowers (*Helianthus*).

Subspecies:

The American Painted-Lady is monotypic, with no recognized subspecies.

Common Painted-Lady (*Vanessa cardui*)

— Rare to Common Immigrant and Seasonal Colonist —

The Common Painted-Lady is one of the greatest of insect migrants, capable of colonizing virtually any region on all of the world's continents excluding Australia, New Zealand and Antarctica. Hence "The Cosmopolitan" is one of its popular names. Research has demonstrated that populations are capable of over-wintering only in core desert areas. In these areas the species is prone to incredible population explosions that result in vast emigrations that result in large numbers reaching southern Ontario and much farther north. These irruptions usually occur in wet years when over-wintering areas receive more rainfall than normal; this produces an abundance of larval foodplants in these areas, which apparently sparks a population explosion.

It is unknown when Common Painted-Lady was first recorded at Point Pelee, since none of the early naturalists reported this species. George M. Stirrett (in Stirrett 1970: 147-148) states that he saw the species at Point Pelee on a number of occasions, but dates of observation are not mentioned.

Although the species can be quite common during some years, in others only a few individuals are recorded all season. If the species appears early (before the end of May), this often indicates that it will be relatively common during the rest of the season.

A very small, fresh specimen was encountered on June 10, 1982 (Alan Wormington; specimen in PPNP), the only record of the season after the species was present the previous year in numbers. It is possible that this individual over-wintered at Point Pelee (presumably in the pupal stage), but further evidence is needed to support the idea that the species is capable of over-wintering here on very rare occasions.

The Common Painted-Lady is a sun-loving species of open areas and usually avoids locations that are overgrown or even partially shaded; at Point Pelee its favourite haunts are sandy beaches and adjacent areas, particularly where flowering plants are present in abundance.

Broods and Flight Period:

If warm weather persists, the species is regularly encountered to the end of October. ***Early***

Dates: one (fresh) on April 19, 1995 (Alan Wormington); one (fresh) on April 20, 2012 (Alan Wormington, Richard P. Carr); one (fairly fresh) on April 23, 2001 (Alan Wormington). ***Late***

Dates: one (fairly fresh) on December 3, 2001 (Alan Wormington); one on November 20, 2003 (Alan Wormington); one on November 18, 1988 (Christopher M. Lemieux)

Abundance:

Maximum Counts: 280 (fresh) on September 7, 2008 (Alan Wormington); 120 (extremely fresh) on August 27, 2010 (Alan Wormington, William G. Lamond, Kevin A. McLaughlin); 115 (majority extremely fresh) on August 20, 1992 (Alan Wormington). These are all exceptional counts, since the next highest count is of only 25 individuals, recorded on two separate occasions (in 1988 and 1992).

Larval Foodplants:

A tremendous list of foodplants is known for this species (*e.g.*, see Scott 1986: 281-283); these include composites (Asteraceae), borages (Boraginaceae), mallows (Malvaceae), waterleafs (Hydrophyllaceae), legumes (Fabaceae), nettles (Urticaceae), mints (Lamiaceae), nightshades (Solanaceae), roses (Rosaceae), morning glories (Convolvulaceae) and several other families. Composites are utilized more often than other groups, and within this family various thistles (*Cirsium*) are used most frequently.

The species was observed to lay an egg on English Plantain (*Plantago lanceolata*) at West Beach on August 9, 2001 (Alan Wormington *et al.*).

Subspecies:

Despite the world-wide distribution of Common Painted-Lady, there are no recognized subspecies.

Red Admiral (*Vanessa atalanta*)

— **Uncommon to Abundant Immigrant and Seasonal Colonist** —

William W. Saunders recorded it at Point Pelee on June 30, 1882 (see Saunders 1885). Percy A. Taverner stated that it was common during his visit on August 15, 1908, and again on August 14-15, 1909.

This is another species that is stated by various authors to be a permanent resident in Ontario, even though solid evidence for this status is entirely lacking. The last individuals observed each fall are usually extremely fresh, relatively large, and brightly coloured. Observations the following spring, however, usually pertain to small, worn, drab specimens that are obvious immigrants; furthermore, the date of the first immigrants each year can vary by a month or more.

Broods and Flight Period:

The number of broods that are produced at Point Pelee depends, at least in part, on how early the first immigrants arrive. Some years up to four broods might be produced, but probably three is more typical. Most years the species can be found continuously from May to late October **Early**

Dates: one (worn) on March 16, 2016 (Dwayne D. Murphy, Rick Mayos, Matthew Murphy,

Michael Murphy); one on March 18, 1995 (Lorraine H. Foott); one (worn) on March 22, 2012 (Alan Wormington, Henrietta T. O'Neill). **Late Dates:** one (worn) on December 3-11, 2001 (Alan Wormington); one (extremely fresh) on November 17, 1994 (Alan Wormington); one (extremely fresh) on November 16, 2015 (Alan Wormington). The individual on December 3-11 could be seen almost daily hanging around an ancient ash tree at Sparrow Field, where it was subsisting on small amounts of oozing sap.

Abundance:

... **Maximum Counts:** 1200 (fresh to worn) on April 23, 2001 (Alan Wormington, Fred J. Urie, Henrietta T. O'Neill); 300 on April 21, 1985 (Alan Wormington, Ron Ridout); 172 on April 26, 1990 (Donald G. Cecile); 10 (fresh to worn) on November 15, 2001 (Alan Wormington) is a high count for the late date.

Larval Foodplants:

Various nettles (Urticaceae) and hemsps (Cannabaceae) are known foodplants as listed by Scott (1986: 280-281); those specifically found at Point Pelee (Jellicoe 1984: 9) include Stinging Nettle (*Urtica dioica*), Pellitory (*Parietaria pensylvanica*), False Nettle (*Boehmeria cylindrica*), Wood Nettle (*Laportea canadensis*) and Hop (*Humulus lupulus*).

On July 20, 1986, the author was observing a Red Admiral systematically ovipositing on Stinging Nettle when it deposited (presumably in error) a single egg on Spicebush (*Lindera benzoin*), which is not a known foodplant (see Wormington 1987b).

Subspecies:

All North American populations are referable to subspecies *rubria*.

Common Buckeye (*Junonia coenia*)

— Rare to Common Immigrant and Seasonal Colonist —

Percy A. Taverner saw a Common Buckeye at Point Pelee on October 17, 1908, that he attempted to capture but was not successful; this observation represents the first known record of the species for Point Pelee. Taverner found the species again at Point Pelee during the summer of 1913, without providing any specific observation dates (Taverner 1914).

During the past two decades the Buckeye has been recorded almost every year at Point Pelee. Individuals with varying amounts of maroon colouring on the undersides on the wings are the cold-weather *rosa* form, and are regularly encountered during the fall; although this form normally does not appear until late September, in 1994 it was recorded on the very early date of August 20 (Alan

Wormington *et al.*).

Broods and Flight Period:

... **Early Dates:** one (extremely fresh male) on May 7, 2000 (Alan Wormington, William G. Lamond, Kevin A. McLaughlin, S. Bruce Kellett). Immediately following this very early record, there were numerous additional observations; in years other than 2000 (which was unusually early), the next earliest record is of one (extremely fresh) on May 20, 1998 (Alan Wormington, Kevin A. McLaughlin). **Late Dates:** one (worn) on November 26, 2015 (Henrietta T. O'Neill, C. Joseph O'Neill); one (fresh typical form) on November 25, 2011 (Alan Wormington); one (fairly fresh typical male) on November 12-21, 2003 (Stephen T. Pike *et al.*).

Abundance:

... **Maximum Counts:** 686 (fresh to worn) on September 13, 2010 (Adam J. Hall, Rosalee A. Hall, Alan Wormington, Henrietta T. O'Neill); 576 (fresh to worn) on August 27, 2010 (Alan Wormington, William G. Lamond, Kevin A. McLaughlin); 207 (extremely fresh) on October 10, 2004 (Alan Wormington); 23 on May 13, 2000 (James Kamstra *et al.*) is a high count for the very early date, and similarly the 85 (most not fresh) on November 1, 2011 (Alan Wormington) is an exceptional count for the very late date.

Larval Foodplants:

A long list of plants are included in Scott (1986: 276-277), the majority in the plantain (Plantaginaceae) and figwort (Scrophulariaceae) families. Of the three species of plantain (*Plantago*) found at Point Pelee (Jellicoe 1984: 18), all are listed by Scott as confirmed foodplants. Numerous figworts are also found at Point Pelee (Jellicoe 1984: 17), but only one of these is listed by Scott; nonetheless, some of these found here could be utilized.

Common Buckeye is often found at Point Pelee around clumps of English Plantain (*Plantago lanceolata*), and on several occasions females have been observed egg-laying on this plant.

Subspecies:

All Canadian populations are referable to the nominate subspecies *coenia*.

Red-spotted Purple (*Limenitis arthemis astyanax*)

— Uncommon to Common Permanent Resident —

Percy A. Taverner stated that the Red-spotted Purple was one of the commonest butterflies at Point Pelee on September 5, 1909.

Broods and Flight Period:

Typically there are two broods each year, with the possibility of a partial third brood; although

there are records continuously throughout the season, the majority are found from the middle of June to early July (first brood) and late July to late August (second brood). During recent years there have been a number of occurrences during the first three weeks of September; however it is not known if these are late second-brood individuals, or part of a partial third brood of the species.

Early Dates: one (extremely fresh) on May 21, 1998 (Sarah E. Rupert); two (fresh) on May 23, 1991 (Laurel L. McIvor). **Late Dates:** one on October 1, 2010 (Henrietta T. O'Neill); one (not fresh) on September 28, 2002 (Alan Wormington, Henrietta T. O'Neill); one (not fresh) on September 24, 2010 (Alan Wormington).

Abundance:

This species was described as one of the commonest butterflies on September 5, 1909 (Percy A. Taverner); but in modern times this species has rarely been detected in September. **Maximum Counts:** 13 on August 10, 1996 (1st Annual Butterfly Count); nine on August 9, 1997 (Robert Z. Dobos, Barbara N. Charlton, Kevin A. McLaughlin *et al.*).

Larval Foodplants:

Opler & Krizek (1984: 166-167) indicate that Black Cherry (*Prunus serotina*) and Choke Cherry (*Prunus virginiana*) are used most frequently, but poplars (*Populus*) and hawthorns (*Crataegus*) are also used; they question willow (*Salix*) as a foodplant, although it is listed by Scott (1986: 260-261). Scott lists additional foodplants that are found at Point Pelee (Jellicoe 1984) and may be used on occasion, including Blue Beech (*Carpinus caroliniana*), Pear (*Pyrus communis*), Common Apple (*Malus pumila*) and American Basswood (*Tilia americana*).

At Point Pelee the species has been observed egg-laying on Choke Cherry on two different occasions, and both at West Beach — August 3, 2000 and in 2002 (both Alan Wormington). On June 24, 2007, one was observed egg-laying on Downy Serviceberry (*Amelanchier arborea*) at West Beach (Alan Wormington, Thomas P. Hurst *et al.*).

Subspecies:

Point Pelee populations are subspecies *astyanax*, as are those over most of the eastern United States and much of southern Ontario; this subspecies is commonly referred to as Red-spotted Purple. The nominate subspecies (*arthemis*) is not found locally but is widespread northwards; names commonly used for this subspecies are White Admiral and Banded Purple. Obviously the entire species should have a single common name — and preferably derived from the nominate subspecies — but the long-standing usage of different common names for these two strikingly-different butterflies is likely to remain intact for some time

Although Point Pelee is supposedly in the intergradation zone of the two subspecies as mapped by Scott (1986: 260-261), characteristics typical of White Admiral (nominate *arthemis*) have never been detected in our population.

Viceroy (*Limenitis archippus*)

— Common Permanent Resident —

The first reference of this butterfly at Point Pelee is provided by Percy A. Taverner (unpublished notes), who found it common on September 6, 1909.

On very rare occasions the odd individual will be found that completely lacks the dark band across the lower hindwing. One such individual was encountered at West Beach on September 7, 2010 (Alan Wormington).

Broods and Flight Period:

Three broods, early June to early October. ***Early Dates (first brood):*** two (extremely fresh) on May 27, 1998 (Henrietta T. O'Neill, Alan Wormington); two (extremely fresh) on May 27, 2012 (William G. Lamond, Kevin A. McLaughlin); one (fresh) on May 28, 1985 (Alan Wormington); one on May 28, 1994 (Anne Haywood-Farmer). ***Early Dates (second brood):*** one (extremely fresh) on July 17, 2012 (Alan Wormington). ***Late Dates (all broods):*** one (ragged male) on October 17, 2010 (Alan Wormington, Richard P. Carr, Stephen T. Pike); one (fresh) on October 12, 1994 (Alan Wormington); one (worn) on October 12, 1997 (Alan Wormington).

Abundance:

Maximum Counts: 57 on August 7, 1999 (4th Annual Butterfly Count); 52 on August 8, 1998 (3rd Annual Butterfly Count); 50 on August 16, 1990 (Kirk W. Zufelt); seven (extremely fresh) were tallied on the very early date of May 29, 1998 (Alan Wormington, Karl R. Konze *et al.*).

Larval Foodplants:

Various willows (*Salix*) and poplars (*Populus*) are the preferred hostplant as stated by numerous authors. Scott (1986: 259-260) lists additional plants that are used less frequently, including the following that are found at Point Pelee (Jellicoe 1984): various juneberries (*Amelanchier*), Black Cherry (*Prunus serotina*) and Common Apple (*Malus pumila*).

On July 5, 1998, a female Viceroy was watched as it systematically placed numerous (single) eggs on Frost Grape (*Vitis riparis*) at West Beach (Alan Wormington). The grape vines were growing on the ground in an exposed, grassy area where there were no adjacent woody plants to suggest that the butterfly was simply egg-laying on this species in error; instead it was clearly a deliberate action. Grape is not mentioned anywhere in the literature as a larval foodplant, thus it is difficult to explain why this particular Viceroy was systematically laying eggs on this plant species.

Subspecies:

There are several recognized subspecies of Viceroy, but the one occurring across most of North America (including Point Pelee) is nominate *archippus*.

Hackberry Butterfly (*Asterocampa celtis*)

— Abundant Permanent Resident —

A specimen collected June 29, 1965 is the earliest listed by Riotte (1967) for Point Pelee; undoubtedly collected by him and Hebert on their collecting trip; see Langlois & Langlois (1964). But there are several earlier specimens, the earliest one collected by F.P. Ide on July 8, 1927, now in the CNC and illustrated in Butterflies of Canada.

Broods and Flight Period: Late June to early August (first brood) and middle of August to the middle of September, or occasionally later (second brood). When records for all years are combined together, there is a slight overlap of dates for the two broods; however, during any single year there is almost always a clear separation between the last (worn) individuals of the first brood and the first (fresh) individuals of the second. **Early Dates (first brood):** four (extremely fresh males) on June 15, 1991 (Robert Curry, Kirk W. Zufelt); two (extremely fresh) on June 15, 2012 (Rick Cavasin); one (extremely fresh male) on June 17, 2000 (Fred J. Urie). **Late Dates (first brood):** one (ragged female) on August 17, 1992 (Alan Wormington); one (ragged) on August 16, 2014 (Henrietta T. O'Neill); one (ragged female) on August 11, 2013 (Richard P. Carr). **Early Dates (second brood):** five (extremely fresh males) on August 3, 1991 (Alan Wormington *et al.*); one (extremely fresh male) on August 7, 1998 (Fred J. Urie). **Late Dates (second brood):** one (worn) on October 13, 1997 (Henrietta T. O'Neill *et al.*); excluding 1997 (the species was recorded almost daily during the first half of October), the next latest records are one (worn) on October 5, 1990 (Kevin A. McLaughlin); one (worn) on October 5, 1999 (Henrietta T. O'Neill); and one (worn) on October 5, 2013 (Stephen T. Pike, Christopher A. Law).

Abundance:

Numbers recorded in the second brood are only a fraction of the numbers present during the first generation; it is not unusual to record only five to ten individuals. The smaller second brood may indicate that a large proportion of the population produced from the first brood does not emerge, but rather remains dormant until the following summer. **Maximum Counts:** 400 (fresh) on July 14, 1992 (Alan Wormington); 400 (fresh) on July 1, 1994 (Alan Wormington); prior to 2010 the maximum count of the second brood was only 30 (in 1995 and 1997), but that year 282 (fresh to worn) were counted on August 27 (Alan Wormington, William G. Lamond, Kevin A. McLaughlin).

Larval Foodplants:

Various hackberries (*Celtis*) are the only known foodplants (Opler & Krizek 1984: 174-175; Scott 1986: 256-257). Northern Hackberry (*Celtis occidentalis*) and Dwarf Hackberry (*Celtis tenuifolia*) are both present at Point Pelee (Jellicoe 1984: 9), but only the former species is common

and widespread.

Subspecies:

Local populations of Hackberry Butterfly are referable to nominate *celtis*, as are those throughout most of eastern North America.

Tawny Emperor (*Asterocampa clyton*)

— Uncommon to Common Permanent Resident —

The earliest records are six on August 14, 1909 (Percy A. Taverner) and one (worn female) on August 20, 1920 (N.K. Bigelow; specimen in ROM)

One was caught and eaten by an Eastern Wood-Pewee at Sleepy Hollow Picnic Area on July 29, 2010 (Alan Wormington).

Broods and Flight Period: There is one brood, from the middle of July (early July in some years) to the middle of August. **Early Dates:** one (extremely fresh male) on June 26, 1990 (Donald G. Cecile); two (extremely fresh males) on June 29, 1991 (Alan Wormington). **Late Dates:** one (not fresh female) on September 7, 2013 (Dwayne D. Murphy); one (ragged female) on September 5, 1997 (Alan Wormington); one (worn female) on August 29, 1996 (Alan Wormington).

Abundance:

Numbers vary considerably from year to year, and occasionally there are irruptions when large numbers are present; but typically several individuals can be found on a daily basis.

Maximum Counts: 78 (extremely fresh males) on July 11, 1987 (Alan Wormington); 47 on August 9, 1997 (2nd Annual Butterfly Count).

Larval Foodplants:

Various hackberries (*Celtis*) are the only known foodplants (Opler & Krizek 1984: 174-175; Scott 1986: 256-257). Northern Hackberry (*Celtis occidentalis*) and Dwarf Hackberry (*Celtis tenuifolia*) are both present at Point Pelee (Jellicoe 1984: 9); however, only *occidentalis* is common.

Subspecies:

Most of eastern North America, including Point Pelee, is represented by nominate *clyton*.

Northern Eyed-Brown (*Satyrodes eurydice*)

— Common Permanent Resident —

This species is found in a narrow band of wet, meadow-like habitat that is present along the west edge of Pelee Marsh; it is, therefore, most likely to be encountered at sites such as DeLaurier Trail, the east end of Shuster Trail, or the east side of the Woodland Nature Trail. On rare occasions wandering individuals have appeared elsewhere in the park, such as West Beach and the west section of North Dike (August 4, 2009). There are two September records, the latest a worn female, possibly a second-generation specimen, on September 8, 1991, on the Shuster Trail East (Alan Wormington).

The earliest record is of two (fresh males) on June 24, 1912 (C.H. Young; specimens in CNC)

Broods and Flight Period:

A fresh individual was recorded on August 21, 1989, in a year when the season was very advanced; therefore, one would not expect an individual of the first brood to survive to such a late date. For this reason, one must assume that this was also a second-brood individual. **Early Date:** one (extremely fresh male) on June 15, 1991 (Robert Curry, Kirk W. Zufelt). **Late Dates:** one (worn female) on September 8, 1991 (Alan Wormington); one on September 2, 1987 (Kevin A. McLaughlin).

Abundance:

... **Maximum Count:** 50 (not fresh) on July 20, 1982 (Alan Wormington).

Larval Foodplants:

Scott (1986: 235) lists several sedges (*Carex*) as foodplants; of these, Lake Sedge (*Carex lacustris*), Tussock Sedge (*Carex stricta*) and Hop Sedge (*Carex lupulina*) are found at Point Pelee (Jellicoe 1984: 6).

Subspecies:

Populations throughout the Great Lakes area, including Point Pelee, are referable to nominate *eurydice*.

Appalachian Eyed-Brown (*Satyroides appalachia*)

— Uncommon Permanent Resident —

1 worn	July 21, 1982	SE Woodland Nature Trail	Alan Wormington	specimen in PPNP
1 ragged	July 29, 1982	Tilden's	Alan Wormington	specimen in PPNP

This species was undoubtedly overlooked at Point Pelee until 1982 when single individuals were found on July 21 and 29 (Alan Wormington; specimens in PPNP. A seemingly out-of-place individual was observed at the extreme Tip on July 19, 1988 (Alan Wormington); however, Scott

(1986: 235-236) indicates that this species is not confined to any one site and will wander freely within a forest community.

Locations where this species can easily be observed at Point Pelee include the east section of Shuster Trail. During the 1980s this area was more open (meadow-like) and Northern Eyed-Brown was the predominant species here; however, as this area became increasingly overgrown and shaded, *eurydice* has been recorded less frequently while observations of Appalachian Eyed-Brown have steadily increased.

Broods and Flight Period:

... **Early Date:** one (extremely fresh male) on June 22, 1991 (Alan Wormington). **Late Date:** two (worn) on August 10, 1996 (William G. Lamond *et al.*).

Abundance:

... **Maximum Count:** 23 (fresh) on July 17, 1989 (Alan Wormington, Jeffrey L. Larson).

Larval Foodplants:

Of the foodplants included in Scott (1986: 235-236), only Lake Sedge (*Carex lacustris*) and Tussock Sedge (*Carex stricta*) are found at Point Pelee (Jellicoe 1984: 6). Additional sedge species at Point Pelee are perhaps utilized as well.

Subspecies:

Local populations are referable to subspecies *leeuwi*; the northern part of the overall range of Appalachian Eyed-Brown is represented by this subspecies, from southern Ontario through the lower Great Lakes to Minnesota.

Little Wood-Satyr (*Megisto cymela*)

— Abundant Permanent Resident —

Individuals occurring late in the season (*ie.*, in August or even later) have been suggested by some researchers (*e.g.*, see Opler) to possibly represent an undescribed, sibling species. To date such late individuals have not been found at Point Pelee, but they have been found elsewhere in Essex County including Windsor — one such individual was recorded at Windsor on the exceptionally late date of September 19, 1976 (John E. Pilkington).

The earliest record is of one, taken on June 16, 1927 by F.P. Ide, in CNC

Broods and Flight Period:

... early June (occasionally late May) to early July. **Early Dates:** one (extremely fresh) on May

19, 2004 (Alan Wormington, William G. Lamond); four (extremely fresh) on May 20, 1998 (Christopher T. Burris, Fred J. Urie); one (extremely fresh) on May 21, 2000 (Karl R. Konze).
Late Date: three (ragged) on July 18, 1992 (Alan Wormington *et al.*).

Abundance:

... **Maximum Counts:** 190 (fresh to worn) on June 14, 1995 (Alan Wormington, Russell M. Eynon); 80 (fresh) on June 11, 1993 (Alan Wormington).

Larval Foodplants:

Opler & Krizek (1984: 184-185) and Scott (1986: 237) list only two grass (Poaceae) species as known foodplants. Of the two, only Orchard Grass (*Dactylis glomerata*) is found at Point Pelee (Jellicoe 1984: 5); this, therefore, is the presumed foodplant here.

Subspecies:

Pending further research on the possible existence of sibling species within Little Wood-Satyr, populations over most of eastern North America (including Point Pelee) are currently referable to nominate *cymela*.

Common Ringlet (*Coenonympha tullia*)

— Extremely Rare Immigrant —

This northern species (at least formerly) has been steadily advancing southwest in Ontario and is now present throughout much of Essex County. The species was first recorded in Middlesex in 1985 (a specimen in UWO); Elgin in 1989 (Stewart 1992: 8), and Essex in 2000. If and when the Common Ringlet arrives at Point Pelee, it may become a permanent resident immediately thereafter, see Nielsen (1999: 166-167).

Essex County records:

One (fresh) at Pelee Island on August 5, 2000 (Jerry S. Ball, Thomas A. Hanrahan, Paul R. Desjardins), see Anonymous (2001c).

Early June, 2006: one, Windsor, *Essex* (Paul Desjardins)

July 2, 2006: one, La Salle, *Essex* (Mike Gurr)

Broods and Flight Period:

There are two broods, flying from late May to early July and mid-August to mid-September (Layberry *et al.*, 1998)

Larval Foodplants:

The foodplants are various species of grass, *Poa* spp., *Stipa* spp., and more.

Subspecies:

There are seven subspecies found in Canada, but only one, *Coenonympha tullia inornata* in Ontario.

Common Wood-Nymph (*Cercyonis pegala*)

— **Former Uncommon Permanent Resident** —
(Extirpated)

None of the early naturalists to visit Point Pelee ever reported this species. Perhaps the species was too common to either mention or collect; in contrast, at the turn of the century it is also possible that the species was simply absent in our area for reasons that are unknown.

Broods and Flight Period:

Late June to the middle of August. ***Early Dates:*** eight (extremely fresh) on June 22, 1991 (Alan Wormington); two (extremely fresh males) on June 22, 1998 (Henrietta T. O'Neill, Fred J. Urie); one (extremely fresh male) on June 22, 1999 (Alan Wormington). ***Late Date:*** one (ragged) on September 5, 1994 (Michael van der Poorten, Nancy van der Poorten).

Abundance:

... ***Maximum Counts:*** 46 (extremely fresh) on July 16, 1992 (Alan Wormington); 15 (extremely fresh) were counted on the early date of June 26, 1998 (Alan Wormington, Henrietta T. O'Neill *et al.*).

Larval Foodplants:

Most authors simply state that various grasses (Poaceae) are utilized, but specific species are not provided. Scott (1986: 240-241) lists bluestem (*Schizachyrium*) as a foodplant and also states that Kentucky Bluegrass (*Poa pratensis*) is readily accepted in the lab; both of these grasses could be utilized at Point Pelee.

Subspecies:

Individuals resembling two so-called subspecies are found at Point Pelee and elsewhere in southern Ontario, namely *nephele* and *alope*. If these subspecies are valid, they form a massive zone of overlap in southern Ontario from north (*nephele*) to south (*alope*). Our population is referable to *nephele*; however, many individuals are also found with distinct yellow patches on the wings, thus resembling subspecies *alope* of further south.

Monarch (*Danaus plexippus*)

— **Abundant Immigrant and Common Seasonal Colonist**

The famous Monarch is noted for its remarkable migration from central and eastern North America to the pine-oak forests of the Trans-Mexican Volcanic Belt in eastern Michoacán State, northwest of Mexico City.

Early reports of Monarchs at Point Pelee include Taverner (1908) and Beall (1941a, 1941b).

Despite the comments by Fred Urquhart in his monumental work on the Monarch (Urquhart, 1987) the early appearance of individual Monarchs at Point Pelee (for example, from the middle of April to early May) indicate that they have arrived directly from their wintering areas in Mexico. This assumption can be made since it is unlikely that there would be sufficient time for a transitory brood to have been produced. Furthermore, these very early immigrants invariably are in worn condition, indicating that they are at least several months old — in contrast, one would expect immaculate specimens to appear if they were part of a brood that had been produced just prior to arrival, somewhere between Ontario and the wintering areas of Mexico. Therefore, it is highly probable that some individuals that have passed through southern Ontario in the fall have actually returned the following spring to the province — an incredible round-trip journey of at least 6,000 kilometres (3700 miles) covering a period of seven or more months! Furthermore, there is proof that these round-trip migrants are capable of reproducing in Ontario — for example, on the early date of May 26, 1982, several small larvae were observed on Common Milkweed within the Cactus Field that is northwest of Tilden's Woods (Michael W.P. Runtz, Mary Tapzell, Natalie E. Zalkind).

Without a doubt, Monarchs that originate from a brood that is produced between Mexico and Ontario do reach our area as described by Urquhart (*ibid.*). For example, Monarchs in extremely fresh condition have been observed at Point Pelee during the period of May 21 (1999) to June 25 (1992) inclusive. Based on the assumption of an approximate 45-day life cycle — which is typical for large butterfly species — these dates are too early for such individuals to have been produced in Ontario, since spring arrivals are very rare before the middle of May; yet their excellent condition dictates that they could not have originated directly from Mexican wintering areas. Thus, these Monarchs are undoubtedly from a brood that was produced somewhere in transit between Mexico and Canada. Later into the season it is likely that individuals of this “transit brood” continue northward, since very worn individuals are routinely recorded arriving during late summer. It is unlikely that these are survivors from Mexico, yet their worn condition would imply that they have not emerged recently, nor locally in Ontario; the only reasonable explanation would indicate that they too are part of a brood that was produced between Mexico and Canada.

No account of the Monarch would be complete without a summary of the fall migration of this species at Point Pelee. To begin with, southbound migration has been detected — when individuals are observed flying south off the Tip — as early as July 14 in 2012, July 16 in 1996, July 18 in 1995, and July 20 in 1993. Once the southbound migration has started in earnest (by late July or early August), there is then a continuous flow of butterflies to early November and occasionally even later (weather permitting). On a daily basis it is easy to see this migration in full swing — very intent individuals can routinely be seen as they drift southward, either along various beaches or over the waters of Lake Erie; on certain days often they pass overhead at a considerable height, when they are observed riding thermals as do migrating raptors at the same time of year. Maximum numbers during any one season can be expected anytime from the end of

August to early October; it is during this time frame that mass concentrations may occasionally appear at or near the Tip, where literally thousands of Monarchs will congregate overnight in dense clusters on trees and shrubs.. However, it should be stressed that this phenomena is not a common occurrence and has, unfortunately, been excessively over-hyped by both the media and staff at Point Pelee National Park who are not very knowledgeable on the subject. Large concentrations may occur several times during a single season, or not at all. The incredible concentration and overnight roosting of the species is a weather-related phenomena; unfavourable conditions — yet to be accurately described or fully understood — appear to be the impetus for individuals to cluster. Quite often an incredible overnight concentration will disperse very quickly if the weather quickly turns favourable, which is generally warm and sunny conditions in association with light winds.

Over the decades there have been a few instances when truly astounding numbers of Monarchs have been present at Point Pelee; these events are described below under *Maximum Counts*.

The Monarch is one species of butterfly that will fly in both rainy conditions and for a short period following sunset; generally speaking, in our area other species of butterflies are rarely on the wing under such conditions. Also, it is one of few butterflies that are capable of sustained flight when temperatures are as low as 4.5° C. (40° F.); this capability allows the species to continue its southward migration well into late fall.

In 2014, single Monarchs were noticed still flying north, north of Toronto during July 17-19th inclusive, and another was seen on July 21 at the Leamington waterfront doing the same thing; these must be the tail end of the “transit brood” still arriving from the U.S.

Broods and Flight Period:

Spring immigrants arrive over an extended period and include individuals that have arrived directly from Mexico (starting in the middle of May) and those that are part of a brood that was produced somewhere in transit (starting in early June). In southern Ontario, it is probable that only two broods are produced under normal conditions. Locally produced individuals begin to emerge in the middle of July, and become abundant shortly thereafter and throughout the remainder of the season. It is possible that a partial third brood may exist; individuals that are present very late in the season (for example, from the middle of November to early December). During most years, small numbers can routinely be found until early November; after this period, further observations are usually dictated by the presence or absence of suitable weather. ***Early Dates:*** one on April 12, 1986 (John E. Pilkington) is an exceptionally early record and may represent the earliest ever recorded for the Great Lakes Region; two on April 27, 1994 (Paul D. Pratt *et al.*); one (fairly fresh) on April 29, 1990 (Kevin A. McLaughlin). ***Late Dates:*** one (extremely fresh female) on December 4, 1982 (Michael J. Oldham, Alan Wormington); one on December 4, 1995 (Enid Bull).

Abundance:

Spring immigrants tend to be uncommon and erratic in their appearance, when only five or

fewer individuals are likely to be encountered per day. The species becomes considerably more numerous with the emergence of the first brood that is produced locally, starting in the middle of July. During the height of fall migration (late August to early October), it is commonplace to encounter dozens, if not hundreds, on a daily basis; during this time period, all-day mass movements or huge overnight concentrations (most often in the vicinity of the Tip) can be witnessed on rare occasions. **Maximum Counts:** 300,000 on September 17, 1996 (Alan Wormington, G. Tom Hince, Paul D. Pratt *et al.*) is by far the largest number ever reported — these were estimated to have left the Tip in a period of only 90 minutes, from 7:50 to 9:20 a.m.; a detailed account of this migration event was published by the author (Wormington 1997); 96,000 on September 6, 1993 (Alan Wormington, Jon L. Dunn, Sue Utterback *et al.*). Wormington (1994b) described this event as follows “360 were passing by on one side of the park at the rate of 360 per minute”. Over the years there have been several informal reports of concentrations in the range of 10,000 individuals (mostly by park staff), but specific information on these counts is apparently lacking. A count of 29 (fresh) was recorded on the very late date of November 13, 1989 (Alan Wormington). Maximum counts for spring immigrants are 15 (fresh) on June 14, 1982 (Alan Wormington); 14 (extremely fresh) on June 16, 1994 (Alan Wormington); and 12 on May 20, 1996 (Stephen T. Pike). An exceptional 180 (extremely fresh) were counted flying south off the Tip on July 24, 2001 (Alan Wormington), an early date for so many southbound migrants.

Larval Foodplants:

Larvae are commonly found on Common Milkweed (*Asclepias syriaca*), and less frequently on Swamp Milkweed (*Asclepias incarnata*). Swamp Milkweed, however, might well be the most commonly used milkweed at Point Pelee, since it is distributed throughout Pelee Marsh but in areas not easily accessible to park visitors. Butterfly Milkweed (*Asclepias tuberosa*) and Green Milkweed (*Asclepias viridiflora*) are also present at Point Pelee (Jellicoe 1984: 16); although these milkweeds are rare to uncommon here, it is probable that they are also utilized when encountered. Three mature larvae were found on Swamp Milkweed at the west section of North Dike (within Pelee Marsh) on August 10, 2005 (Alan Wormington).

Subspecies:

The Monarch is monotypic with no subspecies recognized.

APPENDIX I:

Potential Point Pelee Species

This appendix includes a total of xx species that have the potential to appear at Point Pelee National Park at some time in the future. One thing is certain about these predictions: despite evaluating all North American butterfly species as to their potential to occur at Point Pelee, it is probable that some particular species will appear from some far-away place that is not on this list! All of the species listed here are covered in the various standard works, such as *A Field Guide to Eastern Butterflies* (Opler 1992); *Butterflies East of the Great Plains* (Opler & Krizek 1984); and *The Butterflies of North America* (Scott 1986).

— need paragraph describing the excitement that can be generated when a creature as frail as a butterfly can appear at Point Pelee from hundreds, sometimes thousands, of miles away. Anyone discovering a species on this list at Point Pelee should consider it a very significant event

Species in this appendix generally fall into two distinct groups. One group consists of species that normally do not reside anywhere near Ontario, but are known migrants capable of travelling great distances from their normal haunts. Some of the species on this list may seem like improbable candidates to appear here; however, when one considers the seemingly improbable species that already *have* occurred at Point Pelee — such as Long-tailed Skipper, Brazilian Skipper, Great Southern White, Mexican Sulphur and Marine Blue, to name a few — this demonstrates that the pool of potential candidates is undoubtedly quite substantial.

The second group includes species that are present relatively close to Point Pelee, including parts of Essex County in addition to southeast Michigan and northern Ohio. These species are permanent residents where they occur and do not normally wander far from their original source; however, they undoubtedly do move short distances in their search for either mates and/or nectar sources. Despite the close proximity of some of these species to Point Pelee — several are found less than 50 kilometres away — they are actually considered *less* likely to occur here than those highly migratory species that may originate from hundreds or even thousands of kilometres away. Species in this category that have recently appeared at Point Pelee include Harvester, Hickory Hairstreak, Meadow Fritillary and Baltimore Checkerspot.

Zarucco Dusky-Wing (*Erynnis zarucco*)

The Zarucco Dusky-Wing is normally found in the southeast United States, but is known to wander northward. In Ontario there is a single (1935) record of *zarucco* east of Toronto at the Rouge River (see Wormington 1991, 1992b). To date the similar Funereal Dusky-Wing has been found numerous times at Point Pelee, probably indicating that *zarucco* could also occur here. Scott (1986: 656) considers *funeralis* and *zarucco* as subspecies of a single species, but most authors treat the two as distinct species.

Swarthy Skipper (*Nastra lherminier*)

It is not clear if records of Swarthy Skipper in the northern United States refer to permanent residents or immigrant strays. If northernmost records do represent strays, then the Swarthy Skipper could be expected to occur at Point Pelee; most likely a stray would appear during August or September. The Swarthy Skipper has been recorded as close to southwest Ontario as northeast Ohio (Iftner *et al.* 1992: 42), southwest Michigan (Nielsen 1999: 197-198) and northeast Indiana (Shull 1987: 47-48).

Whirlabout (*Polites vibex*)

This species is generally confined to the southeast coastal plain of the United States (Opler & Krizek 1984: 236-237), but wanders northward along the Atlantic Coast where at least formerly it reached New York with some regularity (see Shapiro 1974: 26; Cech 1993). In the interior there are far fewer extralimital occurrences, but it has been recorded in Missouri, Iowa and central Pennsylvania (Opler & Krizek 1984: 236-237). An undated specimen in the CNC, reported to have been collected at Toronto (Gibson 1910b), is now considered a valid Ontario record as detailed by the author (see Wormington 1995b). At Point Pelee this species should be watched for in late summer and fall.

Little Glassy-Wing (*Pompeius verna*)

The Little Glassy-Wing, a non-migratory species, is a fairly common permanent resident just north of Point Pelee at Wheatley Provincial Park, *Chatham-Kent*; it is also present in scattered localities throughout Essex County where it is locally common (Oldham 1983: 371). It is possible that a displaced individual could appear at Point Pelee; elsewhere in Essex County the species is on the wing from late June to early August.

Delaware Skipper (*Anatrytone logan*)

Although the species is considered sedentary where found, it is a very fast flyer, indicating that it has the ability to appear anywhere in Essex County; it is already known from Windsor, Hillman Marsh and Pelee Island.

Eufala Skipper (*Lerodea eufala*)

This species is a permanent resident of the southern United States, but wanders northward on a regular basis (Opler & Krizek 1984: 260-261). Northwards there are several records of Eufala Skipper for Indiana (Shull 1987: 74); a single record for the Upper Peninsula of Michigan (Nielsen 1970; 1999: 235-236); and a single record for Ohio (Iftner *et al.* 1992: 64-65). Most northern records are during the months of August and September.

Tropical White (*Appias drusilla*)

In the United States this species is a permanent resident only in Florida and Texas. Northward there are very few extralimital occurrences, but these include records in Maryland, New York and Massachusetts (Opler & Krizek 1984: 55-56); one of the New York occurrences was in Erie County at the east end of Lake Erie (Shapiro 1974: 20).

This species is also known as Florida White, an inferior name for a species that is also found in Central and South America.

Orange-barred Sulphur (*Phoebis philea*)

This tropical species is not a permanent resident north of Florida or south Texas, but strays have occurred virtually throughout the eastern United States (Opler & Krizek 1984: 70-71). There are several Ontario records of Orange-barred Sulphur (for example, see Holmes *et al.* 1991: 162), including one at nearby Windsor, *Essex*, on September 21, 1986 (see Pilkington 1987). The species is, therefore, expected to occur at Point Pelee at some time in the future.

Large Orange Sulphur (*Phoebis agarithe*)

This showy, tropical species is normally not found north of peninsular Florida and south Texas, where it is a permanent resident (Opler & Krizek 1984: 71). However, it must be a very strong flier as strays have occurred numerous times in Missouri (Heitzman & Heitzman 1987: 106), and also in South Dakota (at least once), Wisconsin (twice), Maine, and New Jersey as listed by Opler & Krizek (1984: 71) and Opler (1992: 81-82). More recently, an individual was found and photographed at Letchworth State Park in western New York on July 9, 1995 (Anonymous 1995).

Lyside Sulphur (*Kricogonia lyside*)

This tropical species is resident in the United States only in southern Florida (where it is rare) and southern Texas (where it is abundant). There are not many records of Lyside Sulphur northward, but it has occurred as far north as Nebraska, Missouri and Kentucky (Opler & Krizek 1984: 72-73; Opler 1992: 83-84). Klots (1951: 194-195) states that Lyside has also strayed north to Illinois, but Irwin & Downey (1973: 35) discount this, having placed the species in the category of "Butterflies of Possible Occurrence in Illinois." A potential occurrence at Point Pelee could be anytime from early summer to late fall.

Little Copper (*Lycaena phlaeas*)

In Essex County the Little Copper is currently known only from Windsor, where it is very local but common where found (Oldham 1983: 374). At least formerly (1937) it also occurred just north of Point Pelee National Park at Leamington, as evidenced by specimens in CNC (G.S. Walley). The species is also present throughout southern Michigan (Nielsen 1999: 63-64). This species often colonizes disturbed sites, so it must wander occasionally; it could, therefore, appear at Point Pelee.

This butterfly is also known as American Copper, but this is not a suitable name for a species that is also found throughout much of Europe and Asia.

Purplish Copper (*Lycaena helloides*)

Since this species can be somewhat irruptive and erratic in the eastern portion of its North American range, it is therefore a potential species to appear at Point Pelee. To date the Purplish Copper has not been recorded anywhere in southwestern Ontario (Essex, Kent and Lambton counties), but adjacent to this region the species occurs locally in southeast Michigan (Moore 1960: 20; Nielsen 1999: 68-69) and northwest Ohio (Iftner *et al.* 1992: 89-90).

Great Purple Hairstreak (*Atlides halesus*)

The Great Purple Hairstreak normally occurs in the southern United States with very few records northward (Opler & Krizek 1984: 88). However, since this species has appeared adjacent to Lake Michigan in extreme northwest Indiana (Shull 1987: 143-144), a stray could appear at Point Pelee.

Coral Hairstreak (*Satyrrium titus*)

Although this species is widespread throughout the Great Lakes Region (Scott 1986: 360), in extreme southwest Ontario it is very local. In Essex County the Coral Hairstreak has been found only at Windsor and Harrow (Holmes *et al.* 1991: 84), but a stray could appear at Point Pelee; the species is also widespread in both southern Michigan (Nielsen 1999: 69-70) and northern Ohio (Iftner *et al.* 1992: 91).

Red-banded Hairstreak (*Calycopis cecrops*)

This southern species normally occurs no closer to Ontario than southern Ohio (Iftner *et al.* 1992: 97) and southern Indiana (Shull 1987: 150), where it is a permanent resident in both states (and apparently expanding its range). Although not normally considered a migrant, stray individuals have nonetheless been found in both northeast Illinois (Irwin & Downey 1973: 20) and southwest Michigan (Moore 1960: 16; Nielsen 1999: 78-79). Even more remarkable, the species

was once recorded in south-central Saskatchewan (Hooper 1973: 97). Any Point Pelee occurrence would most likely be in August or September.

Reakirt's Blue (*Hemiargus isola*)

Although this species is not normally a permanent resident north of Texas, it is regularly found much farther north where it can establish seasonal colonies (Opler 1992: 129). Remington (1942) summarized occurrences east of the Mississippi River north to Wisconsin, but mistakenly believed the species was a permanent resident in those areas. Reakirt's Blue has been recorded as far northeast as south-central Michigan (Moore 1960: 20; Nielsen 1999: 90) and northwest Ohio (Iftner *et al.* 1992: 105). The species occurred as recently as 2001 in Michigan () when ... This is generally considered to be the most likely new butterfly species to be recorded in Ontario.

Gulf Fritillary (*Agraulis vanillae*)

As its name implies, this species is a resident of the Gulf Coast of the United States, ranging north regularly (Opler & Krizek 1984: 127-128). The Gulf Fritillary is a great wanderer, however, as demonstrated by its recorded occurrences north to Manitoba (Klassen *et al.* 1989: 118), Wisconsin (Ebner 1970: 139-140), Michigan (Nielsen 1999: 107-108), Ohio (Iftner *et al.* 1992: 115) and New York (Shapiro 1974: 9). Recently the species was recorded for the first time in Ontario, when one was found on June xx, 2010, at Rondeau Provincial Park, *Chatham-Kent*. The species could appear at Point Pelee anytime during the period of June to October inclusive.

Atlantis Fritillary (*Speyeria atlantis*)

It has been reported from a number of southern localities including Indiana (Shull 1987: 179 and 184). Perhaps it is circumstantial only, but none of these publications illustrate a specimen actually obtained from a respective state. In southern areas modern, confirmed records of the species seem to be lacking, indicating that either the earlier reports are erroneous, or the species has retreated its range to the north. In southern Ontario the species has reliably been found as far south as Toronto and Mississauga (specimens in ROM), both of which pertain to strays.

Texan Crescent (*Phyciodes texana*)

This tropical species is generally restricted to the southern United States; nominate *texana* is resident in south Texas and Mexico and is the subspecies that regularly wanders northward. In the central part of the continent strays have occurred north to Minnesota and North Dakota (Scott 1986: 315), but in the east the species has been found no further north than Missouri and Illinois (Opler & Krizek 1984: 143-144).

Green Comma (*Polygonia faunus*)

The Green Comma is a northern, boreal species, but apparent strays have occurred at the approximate latitude of Point Pelee at Hamilton, Ontario (Lamond & Wormington 1995), and northwest Illinois (Irwin & Downey 1973: 27). Recently I located an unidentified specimen of Green Comma in the Royal Ontario Museum that was collected (in 1981) by Quimby F. Hess in Huron County at Hay Swamp; this site (near Zurich) is about 170 km northeast of Point Pelee. The Gray Comma, another northern species, periodically occurs at Point Pelee as an immigrant and subsequent temporary resident. Also a recent record at The Pinery, and 2008 at London.

California Tortoise-Shell (*Nymphalis californica*)

The California Tortoise-Shell is normally not found east of the Rocky Mountains in western North America. On occasion, however, the species experiences population explosions that result in vast emigrations; in eastern North America it has occurred in at least eight different U.S. states including Wisconsin, Michigan, Pennsylvania and Vermont (Opler & Krizek 1984: 156). A future irruption of California Tortoise-Shell could result in an appearance anywhere in Ontario, including Point Pelee.

Amymone (*Mestra amymone*)

This is another tropical species that is resident in south Texas and Mexico; however, the species is highly migratory and strays have been recorded far to the north in South Dakota, Iowa and Minnesota (Opler & Krizek 1984: 170).

Goatweed Butterfly (*Anaea andria*)

As a permanent resident this species is found no closer to Ontario than southern Illinois, where it is considered common (Irwin & Downey 1973: 24). However, strays have been found northward irregularly to southern Ohio (Iftner *et al.* 1992: 138-139) and at least three times to southern Michigan (Moore 1960: 15; Nielsen 1999: 154-155). At Point Pelee a Goatweed Butterfly could possibly be dismissed as pertaining to either a Question Mark or female Tawny Emperor.

Queen (*Danaus gilippus*)

This tropical species is usually restricted as a permanent resident in the United States to southern Georgia, peninsular Florida, and along the Mexican border (Opler & Krizek 1984: 195-

196). The Queen is a great wanderer, however, as demonstrated by its occurrences north to northeast Illinois (Irwin & Downey 1973: 31), central Ohio (Iftner *et al.* 1992: 150) and southern Michigan (Nielsen 1999: 176). Northern records of the Queen are usually in late summer or fall.

APPENDIX II:

Questionable and Erroneous Point Pelee Species

The six species listed below have been attributed to Point Pelee National Park by various authors at one time or another, but have not been accepted for inclusion in the present work. Reasons for excluding these species are detailed in each of the species accounts.

Mottled Dusky-Wing (*Erynnis martialis*)

Formerly I attributed this species to Point Pelee based on a 1988 specimen (see Wormington 1989: 2). However, subsequent examination of this (female) specimen has resulted in it being re-identified as a very small example of Horace's Dusky-Wing.

Little Glassy-Wing (*Pompeius verna*)

An extant specimen of this species is in the collection at Point Pelee National Park. However, there is no collection data attached to the specimen, so it is not known if it was collected at Point Pelee or elsewhere. In 1992 this species was reported at Point Pelee on August 1, as published by Hanks (1993: 28); however, no specimen or photograph was obtained to verify this report.

Dorcas Copper (*Lycaena dorcas*)

Two specimens of this species in the collection of the University of Michigan, Museum of Zoology (Ann Arbor), are labelled "Point Pelee, July 25, P.A. Taverner" but no year is given. In his journals Taverner regularly made lists of butterflies that he encountered at Point Pelee, but never mentioned this species. It is probable that these specimens were mislabelled and were actually obtained in Michigan, since Taverner lived and regularly collected there. It should also be noted that the only known larval foodplant of Dorcas Copper is Shrubby Cinquefoil (*Potentilla fruticosa*), a shrub that has not been recorded at Point Pelee (Jellicoe 1984) nor anywhere in Essex County (Botham 1981).

Silver-bordered Fritillary (*Boloria selene*)

This species is widespread in the Great Lakes Region, but is very rare or absent in southwest Ontario (e.g., see Holmes *et al.* 1991: 117). Although various authors have repeatedly attributed this species to Essex County, this is entirely based (apparently) on a single sight record at Windsor; however, the validity of this sight record is questionable.

Hebert & Fox (1978: 54) include this species as occurring at Point Pelee without giving a source. Apparently their list of butterflies was based, at least in part, on species that could *theoretically* occur at Point Pelee, not necessarily those based on known records. It is highly unlikely, at least in modern times, that Silver-bordered Fritillary has ever occurred at Point Pelee.

Satyr Comma (*Polygonia satyrus*)

The Satyr Comma (= Satyr Anglewing) was mapped for Point Pelee by Holmes *et al.* (1991: 129) in the Ontario Butterfly Atlas. Presumably the source of this record was the 1971 (August 15) report that was published by Catling & Walker (1974) in the Toronto Entomologists Association's annual summary of Ontario butterflies. It is unfortunate that I have been unable to obtain any additional information on this report. Although Satyr Comma is probably a very unlikely candidate to appear at Point Pelee, it is possibly more than coincidence that during the same time period (in both 1969 and 1970) this species was recorded in north-central Indiana (Shull 1987: 200); this area of Indiana is highly disjunct from where the species is normally found, which is at least xx km to the north.

Northern Pearly-Eye (*Enodia anthedon*)

Hebert & Fox (1978: 53) list this species as found at Point Pelee without giving a source. The reason for excluding Northern Pearly-Eye from the present work is the same as that stated above for Silver-bordered Fritillary. In Essex County, until 2006, Northern Pearly-Eye was known to occur only in the vicinity of Windsor (Holmes *et al.* 1991: 146), where it is very local. However, on August 5, 2006, a Northern Pearly-Eye (in ragged condition) was photographed on Pelee Island at Fish Point (Karen R. Yukich, Robert J. Yukich). The origin of this individual is unknown, since the species was not previously known to occur on Pelee Island. If future fieldwork fails to locate the species again on Pelee Island, it would indicate that this individual was almost certainly a stray from an unknown location.

APPENDIX III:

Additional Essex County Butterflies

In Essex County there are a number of areas supporting a rich butterfly fauna, in addition to Point Pelee National Park. Most notable among these are Pelee Island; the Ojibway Prairie complex in Windsor (including Springarden Prairie); and sections of several drainage systems including Big Creek (Holiday Beach), Cedar Creek, and Hillman Creek (Hillman Marsh), etc. Another interesting site is the Oxley Poison Sumac Swamp, which has significant populations of some of the sedge-feeding skippers; this site is difficult to access, in addition to ... partially drained. Elsewhere in Essex County a good diversity of butterflies can be found in many unlikely locations; these include small woodlots with associated streams and open areas; overgrown roadside ditches; planted Alfalfa and Red Clover fields; railway lines (both active and abandoned); various overgrown fields and meadows; and vacant lots within the city of Windsor, or along shoreline areas of both Lake Erie and Lake St. Clair.

The total number of butterfly species known to have occurred in Essex County is 107, a remarkable number for a single county. In comparing this total to Ohio, a state which is entirely south of Essex County, not a single county (out of 88 in total) has recorded more species! The highest list is for Franklin County (located in south-central Ohio which includes the city of Columbus), where 97 species have been recorded (Iftner *et al.* 1992: 26-27).

Of the total of 107 species known for Essex County, 90 of these species have been recorded at Point Pelee National Park. The remaining 17 Essex County species are annotated below.

Hoary Edge (*Achalarus lyciades*)

See Larson (1989: 10-11). The source of these individuals continues to be a mystery. If a permanent population is present somewhere in Windsor, its overall size must be very small considering the numerous, intensive searches that have been conducted in an attempt to find additional individuals. On the other hand, if the individuals to be found thus far are all strays, then it is unknown where they have originated; furthermore, if the species does have a tendency to wander somewhat, then one must wonder why it has not been found at Point Pelee.

Southern Cloudy-Wing (*Thorybes bathyllus*)

There are many records from Windsor and a few from La Salle. It flies from late May to mid-July, with a second generation in August.

Dreamy Dusky-Wing (*Erynnis icelus*)

Again, there are seventeen records from Windsor and La Salle, and none from elsewhere in the county

Columbine Dusky-Wing (*Erynnis lucilius*)

There are nine records from the Windsor area, 1991 to 2012 (Alan Wormington, Jeff Larson, Michael and Nancy van der Poorten. This species is probably more common and widespread than the few records would indicate. Due to the sizable population of the similar Wild Indigo Dusky-Wing in Windsor, this species could be overlooked on a regular basis.

Leonardus Skipper (*Hesperia leonardus*)

The species has been found in a number of localities at Windsor in association with the Ojibway Prairie complex; it has also been recorded at Kingsville, specimen in the CNC, at Brunet Park, Windsor in 1987 and 1991 (Jeff Larson) and at Tremblay Beach Conservation Area on July 29, 1999 (Michael J. Oldham). There is one stray record of a fresh specimen puddling on moist algae on boulders along the shore of Point Pelee Drive just north of Point Pelee National Park; Jeff Larson photo.

Little Glassy-Wing (*Pompeius verna*)

See Appendix I and II

Delaware Skipper (*Anatrytone logan*)

See Appendix I

Mulberry Wing (*Poanes massasoit*)

There are twenty reports of this species in the county, from Windsor, Oxley, Gesto, and one very close to Point Pelee at Leamington, in 1982 (Michael K. Matheson).

Zabulon Skipper (*Poanes zabulon*)

One (extremely fresh male) at Pelee Island (Middle Point) on August 5, 2000 (Jerry S. Ball, Thomas A. Hanrahan, Paul R. Desjardins); see Ball *et al.* (2001). Also, another one seen on Pelee Island on August 16, 2001 at Stone Road Alvar (Bob Yukich, Geoff Carpentier et al).

Black Dash (*Euphyes conspicua*)

There are 35 records from many locations in Essex County, but none from Leamington or Point Pelee.

Two-spotted Skipper (*Euphyes bimacula*)

This more northern species has been reported from Essex County five times, from Windsor, Lighthouse Cove, Cedar Creek Basin and near Stoney Point.

Mustard White (*Pieris oleracea*)

There are two specimens in ROM, taken on July 10, 1919 at Leamington, collector unknown.

Orange-barred Sulphur (*Phoebis philea*)

The first and only known record for Essex County was one recorded *at Windsor on* September 26, 1981 by John E. Pilkington (Pilkington 1987). This individual, a not-fresh female, was visiting the flowers in a garden where it was nectaring on a Petunia. At the time this represented the fourth known record for Ontario and Canada; there was one subsequent record at Leslie Street Spit in 1987 (Barry Harrison).

Little Copper (*Lycaena phlaeas*)

See Appendix I

Coral Hairstreak (*Satyrium titus*)

See Appendix I

Edwards' Hairstreak (*Satyrium edwardsii*)

There are 32 records from Essex County, mostly from Windsor, but also from Arner, Gesto, Harrow and near Kingsville.

Northern Pearly-Eye (*Enodia anhedon*)

See Appendix II

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To overhaul style of literature references, tabs will be .15 and .65

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