

THE BUTTERFLIES OF MANITOBA'S PROVINCIAL PARKS II:

GRAND BEACH PROVINCIAL PARK AND BELAIR FOREST PRESERVE

by **John H. Masters**, P.O. Box 7511, St. Paul, Minnesota

This is the second in a series of articles treating the butterfly faunas of Manitoba's nine provincial parks. Grand Beach Provincial Park, located on Lake Winnipeg 57 miles northeast of Winnipeg, is one of Manitoba's smaller parks. The park is surrounded by the Belair Forest Reserve, which is eminently more suitable than the park for nature studies. The Belair Forest comprises the northern segment of La Petite Montagne de Cypres which extends from Victoria Beach on Lake Winnipeg through the Belair, Agassiz and Sandilands Forest Reserves into Roseau County, Minnesota. This ridge, which was formed as a beach on glacial Lake Agassiz 12,000 years ago, is characterized by shallow sandy soil and mixed deciduous-coniferous forests. Although the forests have been cut over in this century, they are relatively undisturbed now and virtually none of the area has ever been under the plow. The ridge is an excellent area for natural history studies.

Victoria Beach, which is immediately beyond the northern limit of the Belair Forest, is the only part of this area that has received much attention by Lepidopterists in the past. Harold J. Brodie mimeographed a list of butterflies that he had taken at Victoria Beach in 1926; this was published in 1969. George Shirley Brooks, who published the most recent list of Manitoba butterflies (1942), had a summer cottage at Victoria Beach and did quite a bit of his collecting there.

I am including, in this treatment, only those species that have actually been recorded at Grand Beach, Victoria Beach or the Belair Forest. I have, however, spent considerably more time at Sandilands which is farther south on the "Petite Montagne", and most of my observations regarding flight

periods and habitats are drawn from this experience.

Swallowtail Butterflies:

PAPILIONIDAE

BLACK SWALLOWTAIL *Papilio polixenes asterius* Stoll Recorded from Victoria Beach by Brodie. A species of gardens and open fields that is not very abundant in Manitoba.

TIGER SWALLOWTAIL *Papilio glaucus canadensis* Rothschild & Jordan This species is very conspicuous and common from mid-June to mid-July. The large yellow and black butterflies are seemingly everywhere, on flowers, flying up and down roads or forest lanes, or congregating in large numbers at wet spots on a road or beach.

Whites and Sulphurs:

PIERIDAE

NORTHERN WHITE *Pieris napi oleracea* Harris A woodland species that is usually fairly abundant. There are two annual broods, the first one making its appearance in May, the second one in late July.

CABBAGE BUTTERFLY *Pieris rapae* (Linnaeus) Common, especially around human habitation where the larva are pests on garden vegetables. Can be taken from May through September.

CHECKERED WHITE *Pieris protodice protodice* Boisduval & LeConte A roadside butterfly. Only the first brood (in late May) has been observed here, but a second brood is to be expected in mid-summer.

ORANGE SULPHUR *Colias eurytheme eurytheme* Boisduval Common along roadsides, in pastures and in alfalfa fields from mid-summer well into the fall months. Multiple-brooded, but with a continual flight period.

COMMON SULPHUR *Colias philodice philodice* Godart This species is closely related to *C. eurytheme* and found in similar situations.

BLUEBERRY SULPHUR *Colias interior interior* Scudder Both Brooks and Brodie recorded this species at Victoria Beach. I have not seen it here, although it is fairly common in the Sandilands Forest Reserve. Look for it in areas where blueberries grow from early July to mid-August.

LARGE MARBLE *Euchloe ausonides* Lucas ssp. This species is fairly abundant all along La Petite Montagne de Cypres in the first half of June. It seems to prefer jack pine areas, but also occurs in deciduous forests and open fields. Ontario lepidopterists have speculated (because there is a lack of old records) that the species has migrated into this area in recent years—this area being southeast Manitoba, northwest Ontario and extreme northern Minnesota. Brooks (1942) recorded it only from Victoria Beach in southeast Manitoba, but I have found it common at Whiteshell and all the way to Cook County, Minnesota. It is my opinion that the butterfly has always inhabited this area. For one thing, the nearest population from which the butterflies could have come if they migrated here is from along the Manitoba Escarpment (Riding Mountain, etc.) of western Manitoba. This population, known as *E. a. mayi* Chermock & Chermock, is marked in a strikingly different manner from the eastern Manitoba-Ontario-Minnesota population with the females having almost lemon yellow basal areas on their hindwing. Belair specimens are marked quite similarly to *Euchloe ausonides coloradensis* (H. Edwards) from Colorado; I believe, however, that it would be a mistake to apply the name of this distant population to Manitoba individuals until more is known about the relationship between the two populations.

Monarchs:

DANAIDAE

MONARCH *Danaus plexippus plexippus* (Linnaeus) This familiar

butterfly is well known to everybody. It does not overwinter in Manitoba and must migrate in from the south. It succeeds in doing this almost annually in the prairie regions but less frequently in forested areas.

Satyrs and Wood Nymphs:

SATYRIDAE

EYED BROWN *Lethe eurydice eurydice* (Johansson) Recorded from Victoria Beach by Brooks and Brodie. I have not taken it in this area. It should be sought in sedge meadows during July and August.

NORTHERN PEARLY EYE *Lethe anhedon borealis* (Clark) Occurs in more boreal coniferous forest areas from June to late July.

LITTLE WOOD SATYR *Euptychia cymela cymela* (Cramer) Recorded from Victoria Beach by Brooks. This is a species of deciduous woodlands; I have taken it in the Sandilands Forest Reserve in June.

GRAYLING *Cercyonis pegala nephele* (Kirby) A common roadside butterfly in late July into August; also at home in pastures and deciduous woods.

RINGLET *Coenonympha tullia inornata* Edwards Very common throughout southern Manitoba in pastures, vacant fields, hay fields and native prairies. From mid-June until mid-July.

Erebia discoidalis discoidalis Kirby Recorded from Victoria Beach by Brooks. In southeast Manitoba, this species prefers sedgy bogs as a habitat. It should be sought in late May or early June.

MACOUN'S ARCTIC *Oeneis macounii* (Edwards) G. S. Brooks collected many hundreds of this species at Victoria Beach, the only place that he knew of in Manitoba where it occurred, and sent these to his correspondents throughout the world. He was always puzzled by the fact that he was unable to take it consistently. He wrote (1942): '*Oeneis macounii* Edw. has been taken only in a limited area at Victoria Beach where it flies at irregular periods among *Pinus banksiana*.

One year it may be abundant, and then it may not be seen for several years." The one thing that Brooks did not hit upon is the fact that *Oeneis macounii* has a biennial life-cycle and in eastern Manitoba it flies only in even numbered years. It can be found in forest glades among jack pines from mid- to late June. Masters and Sorenson (1967) provide more details on the bionomics of this insect.

Brush-footed butterflies:

NYMPHALIDAE

WHITE ADMIRAL *Limenitis arthemis arthemis* (Drury) Specimens from this part of Manitoba intergrade into subspecies *rubrofasciata* (Barnes & McDunnough), but I prefer to restrict the use of this name to populations from Riding Mountain, Manitoba and westward. This is a very conspicuous and common butterfly here. It is found from mid-June until the last of July, primarily in forested areas.

VICEROY *Limenitis archippus archippus* (Cramer) Local, preferring low marshy areas where willows grow. The Viceroy was recorded from Victoria Beach by Brodie. I have not taken it here but have encountered it in the Sandilands Forest Reserve.

RED ADMIRAL *Vanessa atalanta rubria* (Fruhstorfer) Scarce, but distributed throughout southern Manitoba in nearly every habitat situation. The butterflies are often found along dirt roads, alighting in the last patches of sunlight to hit the road late in the afternoon.

AMERICAN PAINTED LADY *Cynthia virginensis* (Drury) This species is very abundant from late May until October in some years, but in others it is very scarce. It is a roadside butterfly and may be taken in nearly every type of habitat. I have even taken it in bogs.

PAINTED LADY *Cynthia cardui* (Linnaeus) This species does not overwinter in Manitoba and does not occur here at all in many years; in other years it may become extremely abundant. It is possible to find it during just about any summer month.

COMPTON'S TORTOISE SHELL *Nymphalis j-album j-album* (Boisduval & Le Conte) Through the years, Victoria Beach has received a reputation as being a good place to take this species. *N. j-album* has been quite easy to find throughout southeast Manitoba during the past six years. Could it be increasing in abundance? This is primarily a Canadian Zone forest species. It overwinters as an adult and is found in early spring and again from late July onward.

MILBERT'S TORTOISE SHELL *Nymphalis milberti milberti* (Godart) This species is more widespread than the previous, but never becomes quite as abundant in a favored locality. It is double-brooded, overwinters as an adult, and may be taken throughout the summer. It is most frequently found in marshy areas, although it is by no means restricted to them.

MOURNING CLOAK *Nymphalis antiopa antiopa* (Linnaeus) This is a well-known species that occurs throughout North America, Europe and Asia. I have not found *antiopa* as common as *N. j-album* in Manitoba, although *j-album* is a much more prized species. In the Belair Forest area the two species occur together.

COMMA *Polygonia comma* (Harris) I have found *P. comma* rather uncommon in this area. The adults, which overwinter, are found in deciduous forests in early spring and then in late summer and fall.

SATYR ANGLE-WING *Polygonia satyrus neomarsyas* dos Passos. This is the most abundant *Polygonia* species in the Manitoba prairie regions. I have found it fairly scarce at Belair. Adults overwinter and are taken in spring and late summer.

GREEN COMMA *Polygonia faunus faunus* (Edwards) Recorded from Victoria Beach by Brodie and Brooks. I have taken it in numbers at the Northwest Angle Provincial Forest and not uncommonly at Whiteshell and Sandilands. Like the other *Polygonia*, it is found in late summer with overwintering adults found in early spring.

P. faunus is at home in more boreal forest areas than the other *Polygonia* at Belair.

GRAY COMMA *Polygonia progne* (Cramer) This is the most abundant *Polygonia* in the Belair Forest. It is, at least partially, double brooded, a fact which produces a prolonged summer flight from July well into the fall months. Overwintering adults can be found in early spring.

PEARL CRESCENT *Phyciodes tharos tharos* (Drury) A very abundant multiple-brooded species here. *Phyciodes tharos* can be found in every habitat from late May until September.

BATE'S CRESCENT *Phyciodes batesii* (Reakirt) This is a sibling species to *P. tharos* which can only be identified by an experienced observer. Both Brooks and Brodie reported it from Victoria Beach. It should occur in this area but I have not observed it. I have taken it in fair numbers in the Sandilands Forest Reserve. Unlike *P. tharos*, *batesii* is single-brooded; it should be sought at the edges of bogs or in wet marshy areas in early July.

SILVERY CRESCENT *Chlosyne nycteis* Doubleday ssp. *C. nycteis* appears to be single-brooded here, although double-brooded in most parts of its range. Adults in mid- to late June.

HARRIS' CHECKERSPOT *Chlosyne harrisii* (Scudder) ssp. This species was recorded from Victoria Beach by both Brodie and Brooks. I have not taken it here.

HANHAM'S CHECKERSPOT *Chlosyne hanhami* (Fletcher) This species, the principal range of which is southern Manitoba, has been regarded as a subspecies of *Chlosyne harrisii*. I believe them to be separate species, for *hanhami* is considerably larger than *harrisii* and inhabits more open areas, preferring prairies, while *harrisii* is found in more wet marshy areas.

SILVER BORDERED FRITILLARY *Boloria selene atrocotalis* (Huard) A common double-brooded species of marshy areas. A first brood in early June and a second brood in

late July.

MEADOW FRITILLARY *Boloria bellona* nr. *toddi* (Holland) More widespread in occurrence than *B. selene* but not so common locally, *B. bellona* is found along roadsides in pastures and in meadows. A first brood in late May and a second one in July.

BOG FRITILLARY *Boloria eunomia dawsoni* (Barnes & McDunnough) Both Brooks and Brodie have reported this species from Victoria Beach. I have taken it in Whiteshell Provincial Forest, but not elsewhere in southeast Manitoba. The species is a bog obligate and occurs only in pure sphagnum bogs. It should be looked for in mid-June to early July.

ATLANTIS FRITILLARY *Speyeria atlantis atlantis* (Edwards) The commonest *Speyeria* in this area, it is usually abundant from late June until the middle of August. When they first emerge, the adults are for the most part confined to areas along the edges of the forest or in forest lanes, but by July they can be found visiting flowers wherever these are to be found.

GREAT SPANGLED FRITILLARY *Speyeria cybele cybele* (Fabricius) Not so common as *Speyeria atlantis* in this locality and more prone to fly in more open country away from forests.

APHRODITE FRITILLARY *Speyeria aphrodite* (Fabricius) ssp. The scarcest *Speyeria* in this area. Flies with *S. atlantis* and distinguished from them (in these populations) with difficulty.

CALLIPPE FRITILLARY [*Speyeria callippe calgariana* McDunnough] Recorded from Victoria Beach by Brooks (1942). A very unusual record if authentic. Until such time as this record can be confirmed, it is better to leave this species off the Grand Beach list.

Blues, Coppers and Hairstreaks:

LYCAENIDAE

BRONZE COPPER *Lycaena thoe* Guerin-Meneville Not common, but widespread in many habitats. Found from late July until early September.

GREAT COPPER *Lycaena xanthoides dione* Scudder Recorded from Victoria Beach by Brooks. This species is usually associated with native prairie areas and other open lands where its larval foodplant, bitter dock (*Rumex obtusifolius*), occurs. Colonies are common in the Winnipeg area.

PURPLISH COPPER *Lycaena heloides* (Boisduval) This is a roadside butterfly that is found sporadically in late summer in nearly any habitat. Both Brooks and Brodie recorded it at Victoria Beach.

COMMON BOG ELFEN *Incisalia augustinus augustinus* (Westwood) This species is very common and widespread in bogs, although not restricted to them. Before lepidopterists learned to seek it in bogs, it was regarded as very rare in Manitoba. It flies from mid-May until mid-June, primarily in bogs, but sometimes in other habitats such as sandy soiled areas where *I. polios* occurs.

HOARY ELFEN *Incisalia polios* Cook & Watson A local species that is very well adapted along La Petit Montagne de Cypres. It occurs on sandy soils where its foodplant, bearberry (*Arctostaphylos uva-ursi*), grows. It is an early flier and should be sought during the last week of May. There is one locality in the Sandilands Provincial Forest where it may be taken by the hundreds.

PINE ELFEN *Incisalia niphon clarki* Freeman This species is found in the vicinity of its larval foodplant, jack pine (*Pinus banksiana*), in late May or early June. It does not appear to be found in large numbers in this area.

STRIPED HAIRSTREAK *Satyrium liparops fletcheri* (Michener & dos Passos) This is the only hairstreak that has been recorded from Belair, though several others could possibly occur here. *Satyrium l. fletcheri* can be distinguished by the presence of conspicuous orange-brown patches on the upper forewings and, frequently, on the hindwings as well. It occurs along roadsides, in pastures and old fields

from late July to mid-August. Adults are avid flower visitors.

NORTHERN BLUE *Lycaeides argyrognomon* manuscript subspecies Masters This is a very local species of woodland habitats. It was recorded from Victoria Beach by both Brooks and Brodie. I have not taken it here. Adults should be sought in mid-July.

MELISSA BLUE [*Lycaeides melissa melissa* (Edwards)] This species was recorded from Victoria Beach by both Brooks and Brodie. It could occur here, but I suspect that they were confusing the two sexes of *L. argyrognomon* as distinct species. *Lycaeides melissa* very closely resembles *L. argyrognomon* but is found in prairie habitats instead of forests. *Lycaeides melissa* is abundant in the Winnipeg area.

GREENISH BLUE *Plebejus saepiolus saepiolus* (Boisduval) A fairly common species along roads or in open woodlands. Adults from mid-June until mid-July.

EASTERN TAILED BLUE *Everes comyntas comyntas* (Godart) Brooks did not record *E. comyntas* for Manitoba at all; however, he and Brodie both recorded *Everes amyntula* for Victoria Beach. I have found both species together at Sandilands, with *comyntas* more abundant but have found only *comyntas* at Belair. I do not know whether Brooks failed to make the distinction between these two species or whether *E. comyntas* is of recent occurrence in southeast Manitoba. *Everes comyntas* is multiple brooded and adults can be found throughout the summer from late May to late August.

WESTERN TAILED BLUE *Everes amyntula albrighti* Clench Recorded from Victoria Beach by Brodie and Brooks; I have taken it at Sandilands and Whiteshell, but not in this area. It should occur here. I am not certain whether the Brodie-Brooks records are correctly identified or not (see comments under *E. comyntas*). Unlike *E. comyntas*, *E. amyntula* is single-brooded; adults should be sought in early July.

SILVERY BLUE *Glaucopsyche lygdamus couperi* Grote A common early season species of woodland areas. Adults are found from mid-May to late June.

SPRING AZURE *Celastrina argiolus argentata* Fletcher I am not certain about the subspecific designation with this species; *argentata* was described from Cartwright, Manitoba but most eastern Manitoba populations show a degree of intergradation between *argentata* and *pseudargiolus*. This is one of the first butterflies on

the wing in the spring; there is a first brood in May and a second brood in early July.

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A LIST OF BUTTERFLIES TAKEN AT SANDILANDS PROVINCIAL FOREST, MANITOBA

by John H. Masters, P.O. Box 7511, St. Paul, Minnesota

Sandilands Provincial Forest comprises the southern Manitoba segment of La Petite Montagne de Cypres (or Sandilands Ridge) which extends from Victoria Beach on Lake Winnipeg through the Belair, Agassiz and Sandilands Forest Reserves into Roseau County, Minnesota. This entire ridge was formed as a beach from wave action on glacial Lake Agassiz 12,000 years ago. The area is characterized by shallow sandy soil (hence the name sandilands) and mixed deciduous-coniferous forests. Unlike the areas of Manitoba to the west of this ridge, this land has not been cultivated in the past and is now in the public domain as Provincial Forest. The forests have not been cut over for many years and the forest reserve is cut by numerous fire control roads. It is an excellent area for natural history studies.

For the past six years I have been studying butterfly distribution in Manitoba and have recently started to write a series of articles dealing with Manitoba Provincial Parks. The second of these (Masters, 1972) deals with the butterflies of Grand Beach Provincial Park and Belair Forest Reserve which is the northern segment of La Petite Montagne de Cypres. Because I have spent considerably more time working in Sandilands than in the

Belair Forests, I have a much more complete list of the butterflies occurring here. It would seem worthwhile, therefore, to list the species recorded from Sandilands. This list follows. Species that are marked with an asterisk have not been taken by me but have been taken by others or recorded elsewhere as occurring at Sandilands.

PAPILIONIDAE:

Papilio polyxenes asterius Stoll*, *Papilio glaucus canadensis* Rothschild & Jordan.

PIERIDAE:

Pieris protodice protodice Boisduval & LeConte, *Pieris napi oleracea* Harris, *Pieris rapae rapae* (Linnaeus), *Colias eurytheme eurytheme* Boisduval, *Colias philodice philodice* Godart, *Colias interior interior* Scudder, *Eurema lisa* (Boisduval & LeConte), *Nathalis iole* (Boisduval), *Euchloe ausonides* Lucas ssp.

DANAIDAE:

Danaus plexippus plexippus (Linnaeus).

SATYRIDAE:

Lethe anthedon borealis (Clark), *Lethe eurydice eurydice* (Johansson), *Euptychia cymela cymela* (Cramer), *Coenonympha tullia inornata* Edwards, *Cercyonis pegala nephele* (Kirby), *Erebia*