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An Identification Guide

to the

Skipper Butterflies of Marin County

Book 3

Photography and text by

Bob Stewart
Naturalist, Marin County Open Space District

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TABLE OF CONTENTS

Acknowledgement I

Philosophy II

Butterfly Life Cycle III

Skippers (Family *Hesperiidae*) ..... IV/V

Species Accounts PAGE

Sub-family Hesperiinae

Columbian Skipper - (*Hesperia columbia*) 1
Umber Skipper - (*Paratrytone melane*) 2
Artic Skipper - (*Carterocephalus palaemon*) 3
Fiery Skipper - (*Hylephila phyleus*) 4
Woodland Skipper - (*Ochlodes sylvanoides*) 5
Lindsey's Skipper - (*Hesperia Lindseyi*) 6
Dodge's Skipper - (*Hesperia comma dodgei*) 7
The Farmer - (*Ochlodes agricola*) 8
Sonora Skipper - (*Polites sonora siris*) 9
Sachem - (*Atalopedes campestris*) 10
Sandhill Skipper - (*Polites sabuleti*) 11

Sub-family Pyrginae

Silver Spotted Skipper - (*Epargyreus clarus*) 12
Large White Skipper - (*Heliopetes ericetorum*) 13
Common Checkered Skipper - (*Pyrgus communis*) 14
Rural Skipper - (*Pyrgus ruralis*) 15
Pacuvius Dusky Wing - (*Erynnis pacuvius perniger*) 16
Sleepy Dusky Wing - (*Erynnis brizo lacustra*) 17
Propertius Dusky Wing - (*Erynnis propertius*) 18
Mournful Dusky Wing - (*Erynnis tristis*) 19
Northern Cloudy Wing - (*Thorybes pylades*) 20

Bibliography 21

Front Photograph: Woodland Skippers Mating

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PHILOSOPHY

Protecting habitat for butterflies and all other wildlife has been one of the major goals of the Marin County Open Space District since its inception in 1972. To date over 10,000 acres have been acquired. In this effort we join other agencies in Marin, the Point Reyes National Seashore, Golden Gate National Recreation Area, Muir Woods National Monument, California State Parks and Marin Municipal Water District, in providing public access to natural landscapes in the County. There is a growing interest in understanding these natural areas. In fact, there is a growing bioregional movement throughout the United States in which local people become involved in understanding their local natural environments, learn the flora and fauna, and help to protect and restore additional natural areas.

There are a wealth of new field guides to help catalog and identify. For butterflies there are several good field guides for the United States and California. For the most part these guides have been produced by scientists who collect butterflies and who design their books to be used by others interested in collecting. There are a growing number of persons who do not want to kill butterflies or even catch them in a net, but who are interested in identifying them. With so many close focusing binoculars (6-9 feet) available today this is very easy to do. Of course one can watch them with the unaided eye but to get close you have to move **very** slowly. The problem with current guides is that they are rather overwhelming to the beginner with many look-alike species that do not occur in their local area.

This guide is produced for interpreters, rangers or other professionals who participate in environmental education or resource management. The guide is designed for those individuals who are unfamiliar with butterflies and want to start learning to identify them.

BUTTERFLY LIFE CYCLE

Eggs are deposited on discrete host plants. Some species lay only on one species of plant while others may have quite a number of hosts. The egg is only a few millimeters in size; its surface is made up of about 14,000 holes, which allow air to enter but not water. The larva or caterpillar stage hatches from the egg and begins to eat the host plant. The larvae, like all insects, have an outside skeleton or skin which eventually becomes too small for the growing caterpillar. It sheds this outer skin four or five times as it becomes larger. Three different hormones regulate this molting process one of which is called juvenile hormone which keeps the larva from developing adult structures. This hormone does not circulate during the last molt and some adult structures immediately begin to form on the inside of the caterpillar. When the last stage caterpillar has grown to sufficient size it wanders off to enter the pupa stage. In this stage there is a transformative chemical breakdown and reformation of all but certain thorax structures which ends in an adult butterfly. The adult butterfly emerges from the pupal case, mates with its own species and the female completes the cycle by laying her eggs on specific plants.

SKIPPERS (*Family Hesperiidae*)

Of the approximately 250 species in North America 20 have been found in Marin. Skippers can be separated from other butterflies mainly by the fact that the clubbed antennae are **bent backwards**. They also have excellent large eyes, stocky bodies and powerful flight muscles. There are two groups of Skippers in Marin County:

1. Grass Skippers (*Sub-family Hesperiinae*) - In this group the host plants are sedges and grasses, their colors are orange and brown and when perched hold their wings together over the body OR the hind wings spread flat (90°) and front wings spread only partly (45°).

The larvae live in a silk nest on the host plants sometimes underground to escape grazing animals. Adult males have a black gland on the upper front wings (stigma). This stigma gives off female attracting chemicals (pheromones).

2. Herb, Shrub and Tree Skippers (*Sub-family Pyrginae*) - In this group the host plants are either herbs, shrubs or trees. When perched this group of Skippers hold their wings out flat or occasionally together over their body.

The fast, abrupt flight of the Skippers make them difficult to follow. By patiently watching while standing still one can locate them when they land. Keep your eye on the spot as you move **slowly** into closer range (or use close focus binoculars like Minolta Pocket Binoculars which focus to 5.5 feet). By knowing the field marks of both the upper and lower wings most individuals can be identified to species in the field.

The common and scientific names are according to Checklist and English Names of North American Butterflies, 1995.

Rationale for order of the Grass Skippers: The key to distinguishing the species in the field is the Under Hind Wing, and secondly, the Upper Front Wing pattern. The order in this guide will facilitate learning the Under Hing Wing pattern.

Comparison of Under Hing Wing patterns

Group 1, Distinctive patterns

Columbian (page 1) most of the outer **spot band straight**
Umber (page 2) two large vague **yelllow spots** on rich brown ground color
Arctic (page 3) unique pattern
Fiery (page 4) wide spot band. Upper part of the band offset from bottom part.
Woodland (page 5) roundish dark spots on yellowish ground color

Group 2, Outer Spot Band Irregular - spots of different shapes and sizes

Lindseys (page 8) dark spots in fringe at end of each vein. Veins yellowish.
Dodges (page 7) no dark spots in fringe. Veins not yellowish. Lower part of spot band often missing.

Group 2, Outer spot band regular, i.e., each spot about the same size. The whole band pattern shaped like the letter "C".

Farmer (page 8) ground color orangish. Spot band very faint or missing -- or 00 dark color on either side of band
Sonoran (page 9) spot at base of wing opposite the spot **band**
Sachem (page 10) spot at base of wing opposite the spot band as in Sonoran. But large, faint **brown spot** just inside the **bottom** of the spot band.
Sandhill (page 11) central spot in the spot band much longer than the others in the band. Veins yellow.

Comparison of Upper Front Wing pattern for selected species

Umber (page 2) four orangish spots (top spot made up of three small rectangles)
Sachem (page 10) Male. Large wide stigma no dark shape outside the stigma toward the border of wing as in Fiery, Woodland and Farmer below.
Fiery (page 4) Male. Shape outside stigma toward the border of wing **connected** to stigma. Female the same except she has no stigma but there is a similar dark shape in the same place as the male stigma. Large space of orange under stigma (both sexes).
Farmer (page 8) Male. Small orange spot near outside tip of stigma. Not much orange under stigma.

COLUMBIAN SKIPPER *Hesperia columbia*

KEY FIELD MARKS:	Under Hind Wing yellowish with a slightly curved **mostly straight** silver spot band.
ADULTS FLY:	March-May and September-October
HIBERNATE AS:	Unknown
HOST PLANTS:	June Grass (*Koeleria macrantha*) California Oat Grass (*Danthonia californica*)
RANGE:	Oregon and California. Not in the deserts. In Marin it becomes fairly common on the slopes east of Bon Tempe Lake in September. Has been found at China Camp State Park, on Big Rock Ridge and on the Pine Mountain fire road.
NOTES:	The first photograph is of the male. The silver spot band is on the under hind wing, the under front wing is next, and finally the upper front wing showing the black stigma. The second photograph is of the under wings.





UMBER SKIPPER *Paratrytone melane*

KEY FIELD MARKS:

1. Under Hind Wing has vague yellowish areas on rich umber brown.

2. Upper Front Wing has **4 yellowish spots**; the bottom one more of a streak.

ADULTS FLY: March-June and July-October

HIBERNATE AS: Unknown

HOST PLANTS: Hair Grass (*Deschampsia caespitosa*)
Bermuda Grass (*Cynodon dactylon*)

RANGE: California and Southern Arizona.

In Marin it has been found generally along wooded streams and gulches where there are sunny areas. Has been seen on Mount Burdell O.S.P., Bon Tempe Lake, China Camp State Park, Deer Island O.S.P. and Bolinas Laoon watershed.

NOTES: The first photograph is of the under hind wing. Note the tongue curving into the flower. The second photograph is looking down on the upper front wing. Note the hook back on the antenna club.





ARTIC SKIPPER *Carterocephalus palaemon*

KEY FIELD MARKS:	Blackish with orange spots (a unique pattern).
ADULTS FLY:	May-June
HIBERNATE AS:	Larva
HOST PLANTS:	Purple Reed Grass (*Calamagrostis purpurascens*)
RANGE:	Alaska to central California and Wyoming and east to Nova Scotia and New England. Also Eurasia to Japan. There are no known recent records from Marin county. There are recent records from Plantation in Sonoma County (shown in photograph).



FIERY SKIPPER *Hylephila phyleus*

KEY FIELD MARKS:

Under Hind Wing

1. Yellowish ground color with **small roundish** dusky spots.

Upper Front Wing

1. The dusky shape just outside the stigma **does not touch** the stigma as in *Ochlodes sylvanoides* (page #5).

2. Orange color on the edge extends deep into the dark border resembling flames. True of the Upper Hind Wing as well.

ADULTS FLY: April - December

HIBERNATE AS: Unknown

HOST PLANTS: Bermuda Grass (*Cynodon dactylon*)

RANGE: California and Baja, California eastward to the Atlantic states and south to Argentina. Is now a resident of Hawaii.

Can be expected anywhere in Marin County.

NOTES: The first photograph is of a mating pair.
The second photograph is looking down on the upper front wing of a male.





WOODLAND SKIPPER *Ochlodes sylvanoides*

KEY FIELD MARKS:

Under Hind Wing

1. Both sexes have a **wide** spot band; the top two spots are **offset inwardly** from the others (see cover photograph).

Upper Front Wing

1. Outer tip of the stigma directly touches a dusky mark which in turns **almost** touches the dusky outer border (photograph #1). Female similar but no stigma (photograph #2).

Upper Hind Wing

1. Note that the dusky border **does not** have deep orange intrusions as in the Fiery Skipper (page #4).

ADULTS FLY: July-October

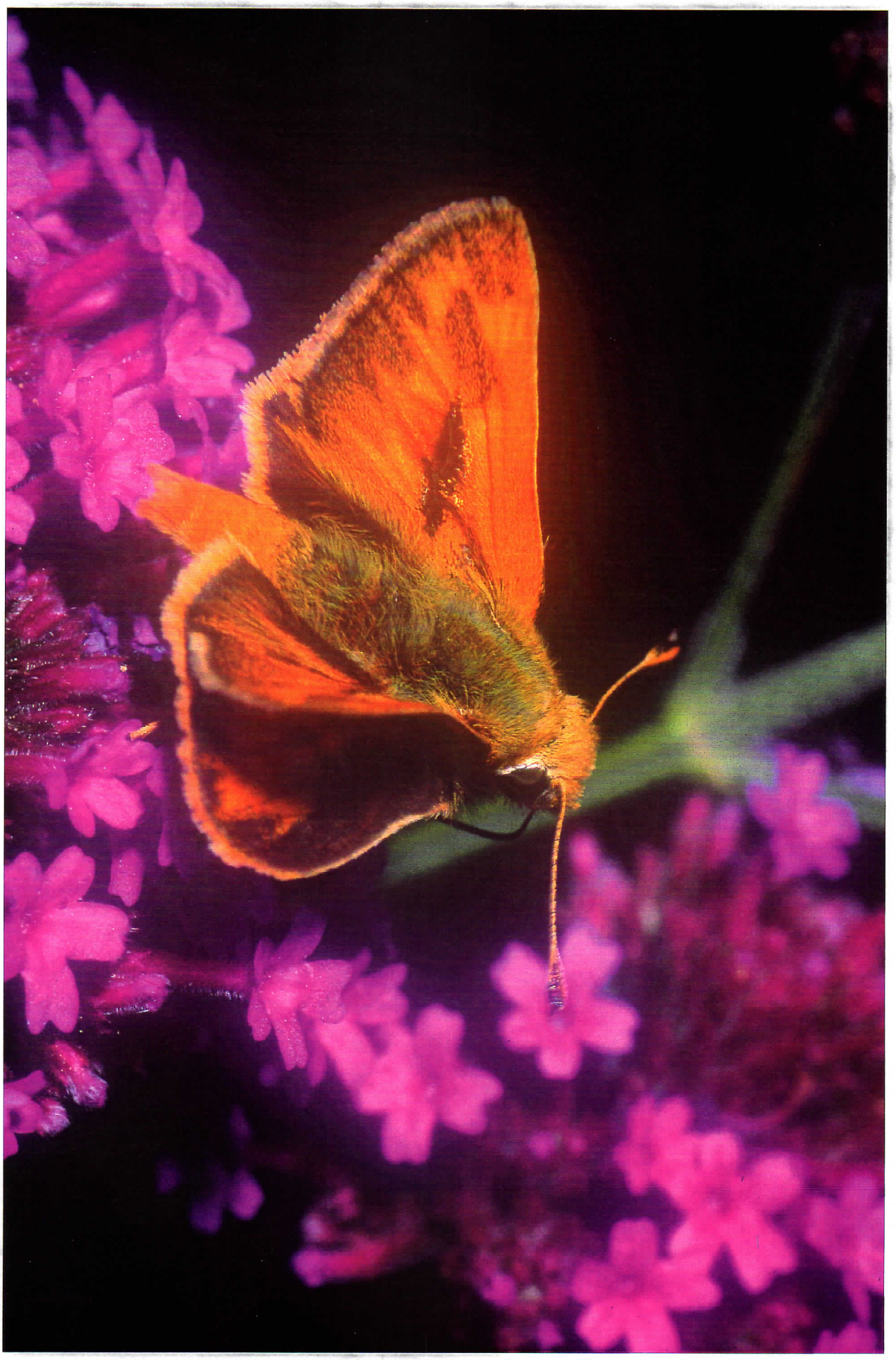
HIBERNATE AS: Egg or first instar larva

HOST PLANTS: Rye Grass (*Elymus spp.*)
Lawn Grasses

RANGE: British Columbia to Baja, California, east to Alberta, south to Arizona and New Mexico.

Extremely common in Marin where it can be found almost anywhere.

NOTES: Photograph #2 is instructive, starting from the yellow flower, in that it shows the Upper Hind Wing, the Under Front Wing and the Upper Front Wing each of which has a distinctive pattern.





LINDSEY'S SKIPPER *Hesperia Lindseyi*

KEY FIELD MARKS: Under Hind Wing
Spots of band large irregular extending along the veins **small dark points at end of each vein on edge (fringe) of wing**.

ADULTS FLY: May-July (June)

HIBERNATE AS: Eggs (the larva fully formed inside)

HOST PLANTS: Idaho Fescue (*Festuca idahoensis*)
California Oat Grass (*Danthonia californica*)

RANGE: Southern Oregon, northwestern Nevada and California.

There are colonies on Azalea Hill north of Bon Tempe Lake and on Deer Island O.S.P.



DODGES SKIPPER *Hesperia comma dodgei*

KEY FIELD MARKS: Under Hind Wing

1. A white spot band which is curved (see second photograph) or the bottom is missing so appears to be straight but diagonal (see first photograph).

2. The ground color is chocolate brown.

ADULTS FLY: Late July-October

HIBERNATE AS: Egg, larva or pupa

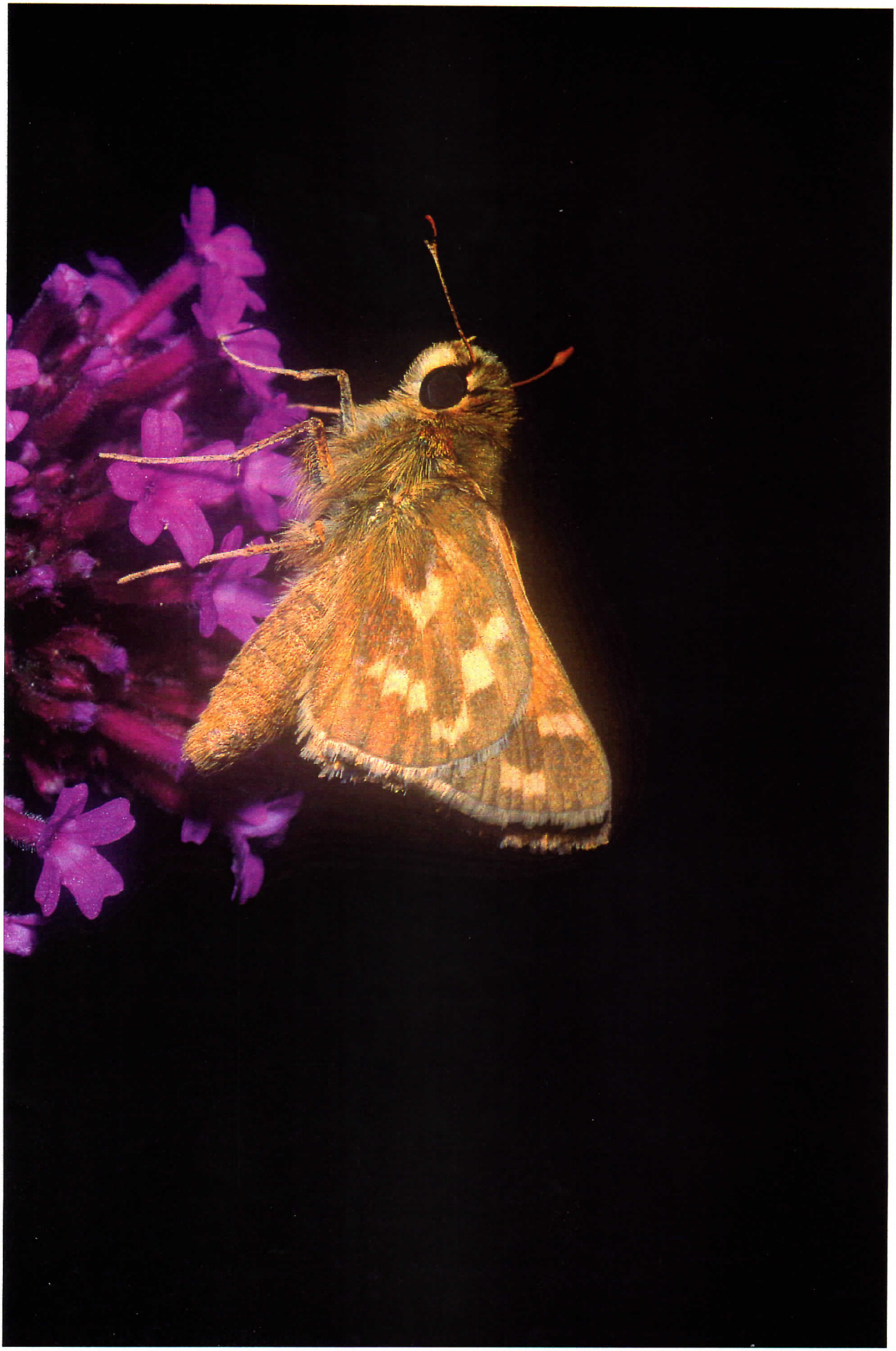
HOST PLANTS: Red Fescue (*Festuca rubra*)

RANGE: The *comma* complex of subspecies is widespread from Alaska to Labrador, south to Maine, Nebraska and the western United States. It also flys in Europe.

The Marin subspecies, *dodgei*, becomes fairly common to the north of Mount Tamalpais to Point Reyes on grassy slopes.

NOTES: The first photograph shows the lower part of the spot band missing on the under hind wing.
The second photograph shows a complete spot band.
The third photograph shows the male upper front wing.
The fourth photograph shows the female upper front wing.









THE FARMER *Ochlodes agricola*

KEY FIELD MARKS:

Under Hind Wing

1. Very pale yellowish curved spot band (or none)

Upper Front Wing

1. Small clear spot(s) above the stigma.
2. Not much orange below the stigma (compare with *O. sylvanoides*, page #5).

ADULTS FLY: May-July

HIBERNATE AS: Unknown

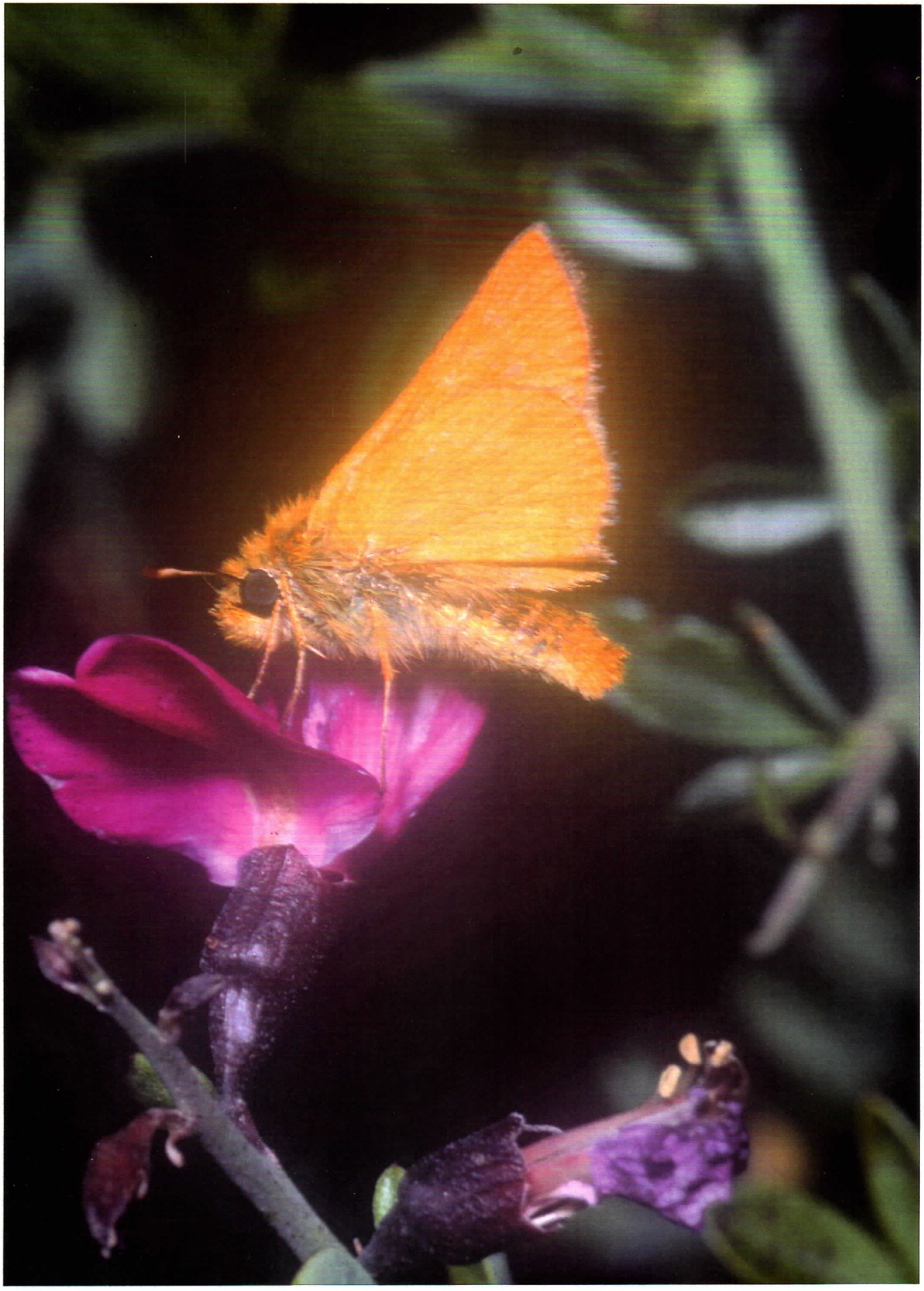
HOST PLANTS: Grasses

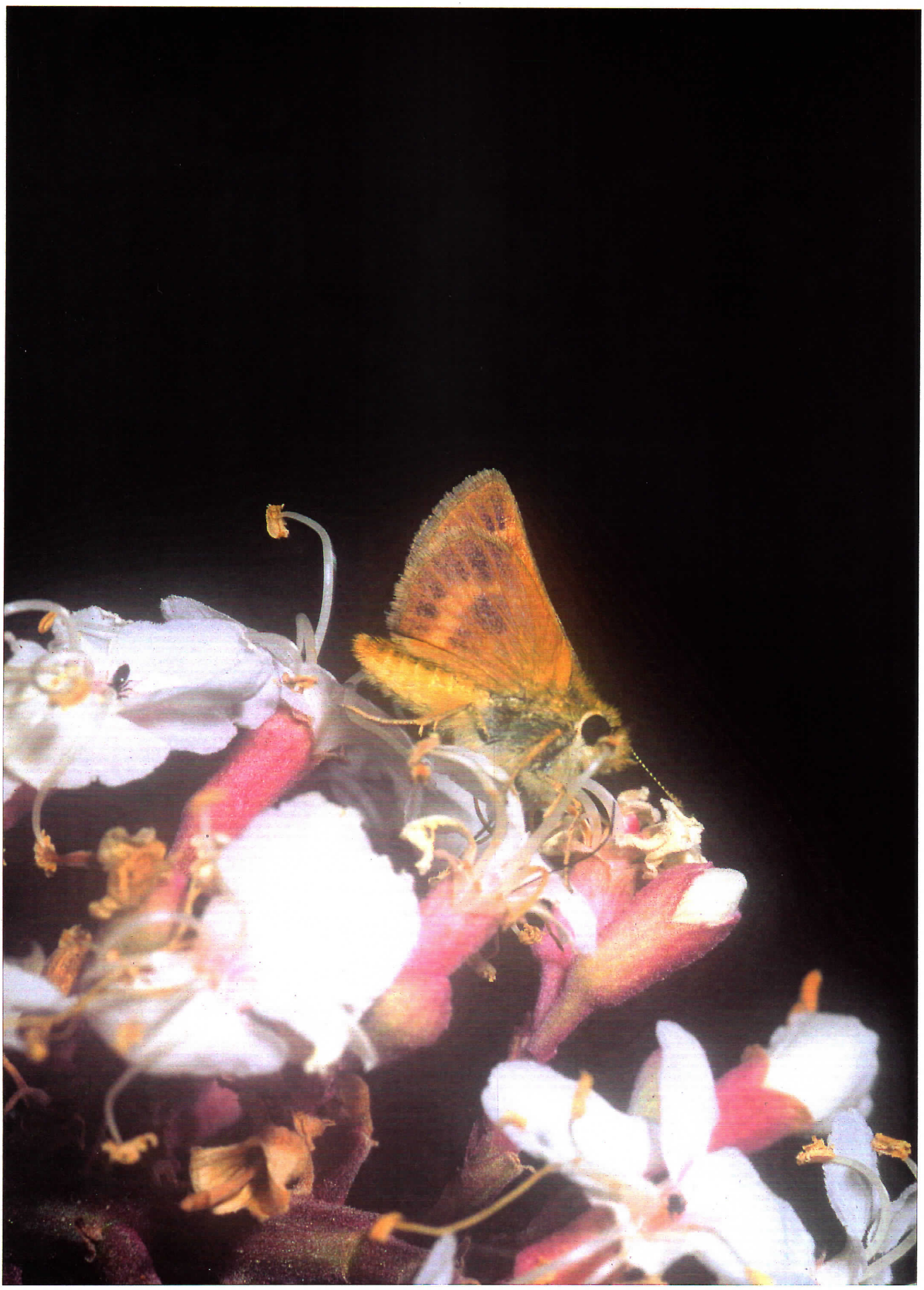
RANGE: Southern Oregon to Baja, California

Found commonly in the grassy hills from Mount Tamalpais to Point Reyes.

NOTES: The first photograph shows the male upper front wing.
The second photograph shows the male under hind wing with spot band barely visible. (It is distinguishable, however, by its orangish ground color.)
The third photograph shows the female under hind wing spot band outlined on both sides by dusky.







SONORA SKIPPER *Polites sonora siris*

KEY FIELD MARKS: Under Hind Wing

1. A semicircular spot band in which all the spots are approximately the same size.

ADULTS FLY: July-September

HIBERNATE AS: Unknown

HOST PLANTS: Idaho Fescue (*Festuca idahoensis*)
Other grasses

RANGE: British Columbia to Baja, California and east to Colorado. Not in the Great Basin.

Has been found in Marin, but we do not know of any recent records.

NOTES: Photograph #1 under hind wing.
Photograph #2 male upper front wing
Photograph #3, Female Upper Front Wings

All photographs are of *Polites sonora sonora* (*P.s. siris* is much darker).







SACHEM *Atalopedes campestris*

KEY FIELD MARKS:

Under Hind Wing

1. Very faint yellow spots all about the same size making a semicircular band. The spots do not extend inwards as in the Sandhill Skipper (page #11).

2. The veins are brown (yellow in Sandhill Skipper, page #11).

3. Brown spot just inside the lower spot band (photograph #3 and #4) may distinguish from *Polites sonora* (page #9).

Upper Front Wing

1. Male has very large stigma (photograph #1)

2. Female has two glassy spots just outwards from the middle dark spot (photograph #2).

ADULTS FLY: April-June and August-October

HIBERNATE AS: Mature larva

HOST PLANTS:
Bermuda Grass (*Cynodon dactylon*)
St. Augustine Grass (*Stenotaphrum secundatum*)
Kentucky Blue Grass (*Poa pratensis*)
Red Fescue (*Festuca rubra*)

RANGE: Resident in southern portion of United States, including the Central Valley of California. Migrates to Oregon, North Dakota and New York.

Can be expected anywhere in Marin County.









SANDHILL SKIPPER *Polites sabuleti*

KEY FIELD MARKS: Under Hind Wings

1. Irregular pale yellow spots make a semicircular spot band but the inner spots tend to be more **elongated** compared to The Farmer (page #8) and the Sonoran Skipper (page #9).
2. **Yellow** veins extend to the edge of the wing.

ADULTS FLY: April-September

HIBERNATE AS: Pupa

HOST PLANTS: Salt Grasses (*Distichlis spicata)*

RANGE: British Columbia through Baja, California and east Colorado and New Mexico.

Can be expected throughout Marin county

NOTES: First photograph is the under hind wing.
Second photograph is the upper front wing of the male.
Third photograph is the upper front wing of the female.







SILVER SPOTTED SKIPPER *Epargyreus clarus*

KEY FIELD MARKS:

Under Hind Wings

1. Has a large silver spot

Upper Front Wing

1. Has a diagonal row of large dull yellow rectangles

ADULTS FLY: May-July

HIBERNATE AS: Pupa

HOST PLANTS: Wisteria (*Wisteria spp.*) (*Amorpha spp.)*
Black Locust (*Robina pseudo-acatia*)

RANGE: Most of the United States except the Great Basin. Also in southern Canada.

Has been observed near the pump house located about 3.5 miles below Alpine Dam on the Alpine-Kent Pump Road and at Deer Park, Fairfax.



LARGE WHITE SKIPPER *Heliopetes ericetorum*

KEY FIELD MARKS: Under Hind Wings
1. White with rusty markings

ADULTS FLY: March-October

HIBERNATE AS: Unknown

HOST PLANTS: Cheeseweed (*Malva nicaensis*)
Other Mallows (*Malvaceae*)

RANGE: Washington to Baja, California and southeasterly to Colorado, New Mexico and Arizona.

No recent records we know of in Marin County



COMMON CHECKERED SKIPPER *Pyrgus communis*

KEY FIELD MARKS: Upper Wings

1. Extensive white markings on gray ground especially a row of **large white rectangles** in mid-wing.

ADULTS FLY: March-October (November)

HIBERNATE AS: Full grown larva

HOST PLANTS: Cheeseweed (*Malva nicaensis*)
Other Mallows (*Malva spp.*)

RANGE: All of United States and southwestern Canada south to Argentina.

Can be expected anywhere in Marin County.

NOTES: The photograph shows a mating pair. The lower lighter colored individual is the male. The upper darker one is the female.



RURAL SKIPPER *Pyrgus ruralis*

KEY FIELD MARKS: <u>Upper Wings</u>

1. White spots like Common Checkered Skipper (page #14) but less rows and **no** large rectangular spots.

ADULTS FLY: March-June

HIBERNATE AS: Unknown

HOST PLANTS: Unknown

RANGE: British Columbia through California, Utah and Colorado. Not in the Great Basin.

Has been found in Marin County in the hills west and above Mill Valley.



PACUVIUS DUSKY WING *Erynnis pacuvius perniger*

KEY FIELD MARKS: The darkest Dusky Wing

ADULTS FLY: May-June

HIBERNATE AS: Larva

HOST PLANTS: California Lilac (*Ceanothus sp*)

RANGE: British Columbia to Baja, California. Other western states except not in the Great Basin.

Has been found just east of the Pine Mountain fire road at Pine Mountain.



SLEEPY DUSKY WING *Erynnis brizo lacustra*

KEY FIELD MARKS: Upper Front Wing

1. Has two incomplete bands

2. **Lacks** transluscent spots of other Dusky Wings

ADULTS FLY: March-June

HIBERNATE AS: Full grown larva

HOST PLANTS: Leather Oak (*Quercus durata*)

RANGE: Central California to Baja, California and southwestern United States and all of eastern United States.

No recent records that we know of in Marin County.



PROPERTIUS DUSKY WING *Erynnis propertius*

KEY FIELD MARKS:

Upper Front Wing

1. Well-defined glassine spots (especially female) and heavily scaled with gray.

Upper Hind Wing

1. Light tan spots

ADULTS FLY: April-July

HIBERNATE AS: Full grown larva

HOST PLANTS: Coast Live Oak (*Quercus agrifolia*) and others

RANGE: British Columbia to Baja, California. Also northwestern Nevada.

Can be expected all over Marin County, especially around where the food plant grows.



MOURNFUL DUSKY WING *Erynnis tristis*

KEY FIELD MARKS: Upper Hind Wing
1. Edge of wing with white border.

ADULTS FLY: March-October

HIBERNATE AS: Larva

HOST PLANTS: Coast Live Oak (*Quercus agrifolia*)
Blue Oak (*Quercus douglasii*)
Valley Oak (*Quercus lobata*)

RANGE: Southwestern United States from California to Texas.

Can be found all over Marin County.



NORTHERN CLOUDY WING *Thorybes pylades*

KEY FIELD MARKS:

Under Hind Wing

1. Two irregular transverse dark bands.

Under Front Wing

1. A triangle of white spots on middle wing which is apparent from the Upper Front Wing also.

ADULTS FLY: May-July

HIBERNATE AS: Full-grown larva

HOST PLANTS:
(*Amorpha californica*)
(*Medicago sativa*)
White Clover (*Trifolium repens*)
American Vetch (*Vicia americana*)
Lotus (*Lotus spp.*)

RANGE: Most of the United States and southern Canada. Not in the Great Basin or Panhandle of Texas north to Nebraska.

Has been found at China Camp State Park, on Big Rock Ridge in Marin County and Mount Burdell O.S.P.

NOTES: First photograph of the under hind and front wings.
Second photograph of the upper wings.





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