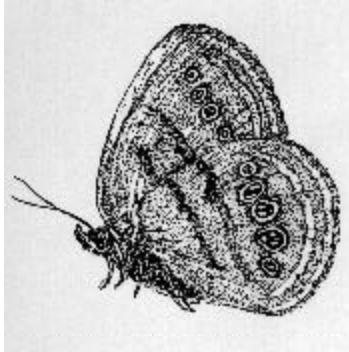


***Neonympha mitchellii francisci* Parshall & Kral, 1989**
Saint Francis' Satyr
(Satyridae: Satyrinae: Euptychiini)



USFWS

Profile prepared by Scott Hoffman Black and Mace Vaughan
The Xerces Society for Invertebrate Conservation

SUMMARY

The Saint Francis' Satyr occurs in the sandhills of Cumberland and Hoke counties, North Carolina, (a single metapopulation) and has a single record in Virginia. Soon after its discovery in the 1980s, it was believed that this butterfly had been collected to extinction, but happily it was rediscovered in 1992. Its habitat is wet meadows, previously likely created by fire or beaver activity, although now mainly maintained by human activity. Despite its protected status, it is still in demand by collectors.

CONSERVATION STATUS

Xerces Red List Status: Critically Imperiled

Other Rankings:

Canada – Species at Risk Act:	N/A
Canada – provincial status:	N/A
Mexico:	N/A
USA – Endangered Species Act:	Endangered
USA – state status:	VA: Threatened
NatureServe:	G1G2T1
IUCN Red List:	N/A

SPECIES PROFILE

DESCRIPTION

Saint Francis' Satyr is a small, dark brown butterfly. The wingspan for the species ranges from 34 to 44 millimeters. Saint Francis' satyr has conspicuous "eye spots" on the lower surfaces of the wings. These eye spots have a dark maroon-brown center, and within the eye spots are lighter opalescent patches that reflect a silver cast. The border of these dark eye spots is straw-yellow in color, with an outermost border of dark brown. The eye spots are usually round to slightly oval and are well-developed on the forewing as well as on the hindwing. The spots are accented by two bright orange bands along the posterior wing edges and two somewhat darker orange-brown bands across the central portion of each wing.

TAXONOMIC STATUS

Neonympha mitchellii francisci Parshall & Kral, 1989.

LIFE HISTORY

The annual life cycle of Saint Francis' Satyr is bivoltine, i.e., it has two adult flights—or generations—per year. Larval host plants are believed to be graminoids such as grasses, sedges, and rushes. Little else is known about the life history of this butterfly. The habitat occupied by this satyr consists primarily of wide, wet meadows dominated by sedges and other wetland graminoids. These sites are often transitional vegetation communities and require on-going disturbance to maintain the open conditions. In the North Carolina sandhills, for example, such meadows are often relicts of beaver activity. On the Fort Bragg training grounds Saint Francis' Satyr has also been observed in yellow pitcher plant (*Sarracenia flava*) swales, with switchcane (*Arundinaria gigantea*), and with the rare plants roughleaf yellow loosestrife (*Lysimachia asperulifolia*) and pocosin (or panhandle) lily (*Lilium iridollae*). It is, however, unknown whether the satyr uses such habitat for reproduction or simply as a dispersal corridor.

DISTRIBUTION

Because of its relatively recent discovery, it is impossible to determine what the original range of Saint Francis' Satyr might have been. However, based upon its demonstrated dependence on periodic fires and the general trend of fire suppression on private lands, it seems reasonable to assume that it once occupied a more extensive area. Currently, only a single metapopulation of Saint Francis' Satyr is known to exist on training grounds of Fort Bragg in the sandhills of North Carolina, in Cumberland and Hoke Counties, and there is a single, more recent (1998), record for Virginia.

THREATS

The major threat is habitat loss. It is likely that, historically, the Saint Francis' Satyr was more wide spread in the sandhills region of North Carolina. Extirpation of the beaver from the state, and loss of the meadow created by its damming activities, was probably the biggest influence on the butterfly's decline.

Now the population levels are so low, collecting for commercial trade is a serious threat. The Saint Francis' Satyr is a highly prized and much sought after butterfly. It was believed that collectors had driven it to extinction within a few years of its discovery (there are reports of collectors returning to known sites every day during the flight season and netting every adult they saw) until it was rediscovered at its type locality in 1992.

CONSERVATION STATUS

Saint Francis' Satyr is a federal endangered species (*Federal Register* 59: 18324-18327; 4/18/94).

Recovery Plan: *Saint Francis' Satyr Recovery Plan* (4/23/96)

Critical Habitat: None designated

The state of North Carolina excludes insects from listing under its Endangered and Threatened Wildlife legislation, so affords no protection to this butterfly. In Virginia, the Virginia Endangered Species Provisions have recently been amended to allow for the listing of insects, and Saint Francis' Satyr is one of the two butterflies added to the state's threatened species list. Virginia has prepared a conservation plan for this butterfly.

CONSERVATION NEEDS

The butterfly's habitat must be maintained. It appears that the preferred wet meadows are a successional stage maintained by disturbance. In the past, beavers and fire ensured adequate habitat sites. Beavers are extirpated from North Carolina and fire is suppressed on many sites. The training grounds at Fort Bragg provide the best habitat because of the disturbance and periodic fires associated with live firing.

RESEARCH NEEDS

Surveys for additional populations and monitor known populations are important. Research is needed into the butterfly's biology and habitat needs, as are studies of appropriate habitat management techniques and captive rearing protocols.

RESOURCES

CONTACTS

U.S. Fish & Wildlife Service: Ms. Nora Murdock, Asheville Field Office, 330 Ridgefield Court, Asheville, NC 28806. Telephone: (704) 258-3939.

North Carolina State University: Dr. Nick Haddad, Assistant Professor of Zoology. Telephone: (919) 515-4588; email: nick_haddad@ncsu.edu.

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