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A NEW FOOD PLANT RECORD FOR ATALOPEDES CAMPESTRIS (BOISDUVAL) (HESPERIIDAE)

Atalopedes campestris (Boisduval) is a common skipper found in the new world from Canada to Ecuador and northern Brazil (Evans, 1955, A catalogue of the American Hesperiidae, the British Museum, London). Host plant records for the larval stages of A. campestris include several grass species: 1) Bermudagrass, Cynodon dactylon (L.) Pers. (Klots, 1951, Field guide to the butterflies, Houghton-Mifflin, Co.; Warren & Roberts, 1956, J. Kans. Entomol. Soc. 29:139-41; Harris, 1972, Butterflies of Georgia, Univ. Oklahoma Press); 2) St. Augustinegrass, Stenotaphrum secundatum (Walter) Kuntze (Howe, 1975, Butterflies of North America, Doubleday & Company, Inc.); 3) large crabgrass, Digitaria sanguinalis (L.) Scop.; and 4) saltgrass, Distichlis spicata (L.) Greene (Tietz, 1972, An index to the described life histories, early stages, and hosts of Macrolepidoptera of the continental United States and Canada, Allyn Mus. Entomol., Sarasota, FL).

Several "tent" structures typical to grass and sedge feeding Hesperiinae were observed on biotypes of Cogongrass, *Imperata cylindrica* (L.) Beauv. on 28 September 1984 at Stoneville, MS. Two larvae and one pupa were found, and from these, two male and one female *A. campestris* adults emerged on 5 and 10 October. Additional larvae and "tents" were observed on *I. cylindrica* biotypes collected from Alabama, Mississippi (Patterson, 1980, Proc. So. Weed Sci. Soc. 33:251) and Iraq (Al-Juboory & Hassaway, 1980, Weed Sci. 28:324–26).

These observations not only establish a new host plant record for A. campestris but indicate that this skipper should be evaluated for its potential as a biological control agent against I. cylindrica. Biological controls are certainly needed for this weedy native of Indo-Malaysia. It is an aggressive, rhizomatous perennial weed, ranking as the world's seventh worst weed (Holm et al., 1977, The World's worst weeds, The University Press of Hawaii). Since its introduction between 1910 and 1920 (Patterson, 1980, Weed Sci. 28:735–740), it has become a pernicious weed of non-cultivated areas in the southeastern United States.

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SPECIMENS OF CALLOPHRYS RUBI L. (LYCAENIDAE) FROM FIJI— TRANSPLANTED COLONY OR ONE-TIME OCCURRENCE?

While studying specimens of worldwide *Callophrys*-related taxa in the British Museum (Natural History) in 1983, I located two specimens of *C. rubi* L. in unincorporated material of the Adams Bequest, which bore labels indicating capture in Fiji in 1904. Given the oddity of these data on specimens of a butterfly generally distributed from the British Isles eastward through Soviet Asia (Higgins & Riley, 1970, A field guide to the butterflies of Britain and Europe, Houghton-Mifflin Co., Boston; Johnson, 1986, A revision of the Callophryina of the world with phylogenetic and biogeographic analyses, Bull. Am. Mus. Nat. Hist., in press), the specimens were photographed (Fig. 1). Robinson (1975, Macrolepidoptera of Fiji and Rotuma, Classey, London) does not list *C. rubi* from



FIG. 1. Photograph of two male specimens of *C. rubi* and data recording their capture in Fiji. Specimens are in British Museum (Natural History).

Fiji. He records 45 species of butterflies for the island, of which four are cited as endemic. It was, therefore, important to ascertain the possible validity of the above-mentioned specimens and their associated data. Two factors are relevant to this consideration-the overall veracity of data in Adams Bequest material and the availability of suitable larval foodplants in Fiji to support C. rubi. Regarding the former, I have examined Adams Bequest material from some 18 genera of Lycaenidae in the British Museum. Although some data are limited to only regional or country citation, I have never found an instance suggesting erroneous data. On the contrary, when Adams Bequest material has provided examples of species poorly represented in international collections, such material has always had data compatible with the known distributions of such species. Further, the C. rubi specimens noted above were found with other Fiji material, including the lycaenids Zizina otis mangoensis (Butler) and Strymon bazochii gundlachianus (Bates), both listed by Robinson from Fiji. Regarding the question of suitable larval foodplant availability, Dr. Herbert Wagner (University of Michigan, Ann Arbor) has informed me that of the foodplants of C. rubi listed by Tutt (1907-1908, British Lepidoptera, Swan Sonnenschein & Company, London [p. 109]) the following are known to have been transplanted to Fiji and, consequently, occur there in varying distributions: Rubus idaeus (Richter), R. frangula (Glitz), Rumex spp., Medicago lupulina Linnaeus, Lotus corniculatus Linnaeus, Trifolium spp., Genista tinctoria Linnaeus, Cytisus spinosus (Linnaeus), and Amygdalus spp. The above categories of taxa represent some 25% of the larval foodplants listed by Tutt. Considering the above, it seems reasonable to accept the two British Museum specimens of C. rubi from Fiji as probably valid records. They have been curated by me into the overall collection of C. rubi at that museum with a special label citing this present note. It remains to be resolved whether this occurrence represents a possible transplanted colony of C. rubi in Fiji or simply a one-time occurrence due to accidental transplantation. Robinson (loc. cit.) cites human factors as having massive influence upon the fauna and flora of Fiji. He also records some butterflies of Fiji as known only from original types or (as in the case of Nacaduba dyopa (Herrich-Schaffer)) as having representation by a large series from one time with few, if any, subsequent captures recorded. Considering the above and the availability of Robinson's general

faunal work, the publication of these data concerning C. rubi specimens from Fiji has seemed advisable.

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ECOLOGICAL OBSERVATIONS ON APODEMIA PHYCIODOIDES BARNES & BENJAMIN (RIODINIDAE)

In their paper on the rediscovery of Apodemia phyciodoides Barnes & Benjamin, Holland and Forbes (1981, J. Lepid. Soc. 35:226-232) indicated that the ecological associations of phyciodoides were imperfectly known and required further study. In late July 1984, I was joined by three other members of the Arizona Entomological Society on a trip to southeastern Sonora, Mexico. This trip was part of an on-going study of the Lepidoptera of Sonora by several members of the Arizona group. Observations made during this trip on phyciodoides may further clarify its habitat preferences and relationships with other riodinids.

Our group consisted of Jim Brock, John Palting, Steve Prchal and myself. The eight day collecting trip was spent along Highway 16, southeast of Hermosillo, terminating at Yecora, near the Chihuahua state line. The collecting area covered was primarily in the Sierra Madre Occidental and its outer foothills and was about 125 airmiles south of the area collected by Holland and Forbes. Four biotic communities (or life zones) were sampled, from San Jose de Pimas to Yecora. Using terminology from Brown (ed., 1982, Desert plants 4:1-342, Biotic communities of the American southwest-United States and Mexico), these communities were: Sinaloan Thornscrub, Sinaloan Deciduous Forest, Madrean Evergreen Woodland, and Petran Montane Conifer Forest. A. phyciodoides was found to be relatively common along the dirt road between Santa Rosa and Yecora, from four to 10 miles east of Santa Rosa. All of these sites fall in the Madrean evergreen woodland community, a Quercus-Juniperus-Pinus habitat. The lowest collecting site, four miles east of Santa Rosa, is near the transition into the Sinaloan deciduous forest, which is indicated by a Ficus-Ceiba-Celtis habitat. The upper collecting site, 10 miles east of Santa Rosa, is near the plateau region of the Petran montane conifer forest, dominated by Pinus species. The Quercus dominated habitat in which phyciodoides was found consisted of a rugged canyon-ridge (barranca) geography. Despite fairly extensive collecting, phyciodoides was not observed in either of the two adjoining biotic communities. Other "indicator" butterfly species that were most prevalent in the Madrean evergreen woodland were: Thessalia theona ssp. (Menetries), Thessalia cyneas (Godman & Salvin), an unknown Piruna species, and Cyllopsis pyracmon nabokovi L. Miller. The presence of *phyciodoides* and *cyneas* together, both of which previously were found in the Chiricahua Mountains of Arizona and both of which have not been found there recently, is intriguing.

On 29 July 1984, while travelling up toward Yecora, both sexes of *phyciodoides* were observed in mid-afternoon at wet places along the dirt road. On 30 July, Brock and I hiked about four miles down the road in late morning, starting from the upper collecting site. The entire length of the hike was in the *Quercus* woodland habitat. Males of *phyciodoides* were observed patrolling along, and landing in, the dirt road. Both sexes were also observed at moisture and nectar. A total of about 25 specimens were collected in the two days. Extensive collecting in the Sinaloan deciduous forest (one to three miles east of Santa Rosa) on 29 July yielded no specimens of *phyciodoides*. The conifer forest