

found basking or foraging in the open adjacent to forested areas into which they attempted to escape. *Ameiva septemlineata* and *A. bridgesi* did not hesitate to run up nearly vertical rock faces and both were seen foraging in small bushes. None of the three species were found far from wooded areas, nor were they found deep in the forest itself. Even in the drier parts of southwestern Ecuador *Ameiva septemlineata* and *A. orcesi* are never far from heavy vegetation. *Ameiva septemlineata* and *A. bridgesi* were active when air temperatures reached about 20°C even under overcast skies. Rain caused a cessation of activity. Too few *Ameiva orcesi* were seen to determine their period of activity.

Results of the analysis of geographic variation and conclusions concerning relationships of the *Ameiva* with disrupted head scales await completion of ongoing research.

TERRY L. ERWIN, Smithsonian Institution

Grant No. 5795—Penrose Fund (1970), \$1,000. Phylogenetic, zoogeographic, and bio-systematic studies of certain carabid ground beetles.

The world-wide subtribe of carabid beetles called Tachyina are very numerous in species and individuals and, in fact, are one of the dominant groups of carabid beetles in the tropical and warm temperate parts of the world. They are poorly understood from all aspects, mainly because of their small size (0.7 mm. to 5.0 mm.) and their great diversity (more than 1,500 species). However, they are one of the commonest groups of beetles to be encountered by United States Department of Agriculture trap lights, general collectors of small Coleoptera, plant quarantine stations, etc.

In 1970 the grantee undertook a systematic revision of the species on a world-wide basis, starting with the New World species. The goals of the project are to provide means of identification for all species, provide information on the phylogenetic relationships, the past dispersal and present distribution of the groups, as well as the assimilation of biological data.

In 1971 the grantee spent one year studying with the foremost living authority on the nearest relatives of this group, Dr. Carl H. Lindroth of Lund, Sweden. During that year visits were made to various important European museums with funds provided by the grant. Type specimens of all 267 New World species were eventually checked during these visits. Museums visited include the British Museum (Natural History), the Muséum National d'Histoire Naturelle, and the Zoological Museum of Moscow University. Other museums were also necessarily visited, but at the grantee's own expense.

Although these visits laid the foundation of a revision of all New World species it will require several years to analyze, write, and publish the total data and to complete the world revision. To date, the papers listed below have been published or are in press. Several more publications on Tachyini will be forthcoming as a result of this grant.

- ERWIN, T. L. 1971. "Fossil Tachyine Beetles from Mexican and Baltic Amber with Notes on a New Synonymy of an Extant Group (Col., Carabidae)." *Entomologica Scandinavica* 2, 3: pp. 233-236.
- 1972. "Two New Genera of Bembidine Carabid Beetles from Australia and South America with Notes on their Phylogenetic and Zoogeographic Significance (Coleoptera)." *Breviora* No. 383: pp. 1-19.
- 1972. "The Lost Type of *Brachinus sallei* Chaudoir (Coleoptera: Carabidae)." *Pan-Pacific Entomologist* 48, 1: pp. 63-64.
- 1972. "Studies of the Subtribe Tachyina (Coleoptera: Carabidae: Bembidiini) Part I. A Revision of the Neotropical Genus *Xystosomus* Schaum." *SI Contributions to Zoology*. In press.
- ERWIN, T. L. and L. J. ERWIN. 1971. "A Guide to the Ground-beetle Collection in the Muséum National d'Histoire Naturelle, Paris (Coleoptera: Carabidae)." Multilithed by SI Duplicating Unit for limited distribution.

HARVEY I. FISHER, Southern Illinois University

Grant No. 1040—Johnson Fund (1971), \$2,000. Natural history and population dynamics of the Laysan albatross.

As a continuation of long-term studies of the Laysan albatross, initiated in 1959 with the support of Grant No. 2690, the period of 15 November to 15 December, 1972, was spent on Midway Atoll. The grantee was aided by Mr. John A. Richardson of Southern Illinois University and Dr. P. B. Hofslund of the University of Minnesota, Duluth.

The field work emphasized the gathering of data on three aspects of the population dynamics of the Laysan albatross: (1) possible cycles in numbers of birds breeding; (2) general trend of populations; and (3) survival of birds of known age.

The possibility of regularly occurring highs and lows in breeding populations became evident between 1956 and 1960, from more or less casual personal observations by the grantee and by various residents on the island. Accordingly, a permanent study plot of approximately one acre was established on Eastern Island of Midway in 1960. During the egg-laying season of each year since, a careful check has been made of the number of nests with eggs. Each nest is marked and the pair using the nest identified by band numbers. Twelve years of observations show the fewest nests in 1960, 1964, and 1968 and consistently and significantly greater numbers in the intervening years. In 1971 there were more nests than in any previous year.

When it became apparent that the breeding populations on Eastern Island were indeed increasing in 1961-1963, following the low in 1960, a much larger control plot was set up on Sand Island in 1963. The objectives were to determine whether similar fluctuations in breeding numbers were taking place elsewhere and to assess the effect of daily, intensive work in the plot on Eastern Island. Counts of nests in the Sand Island area were made but once each year, in the second week of December after 97 per cent of the eggs were thought to have been