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AN ANNOTATED CHECK LIST OF STAPHYLINIDAE (INSECTA: COLEOPTERA) RECORDED FROM BORNEO

Peter M. Hammond

INTRODUCTION

The beetle family Staphylinidae is poorly known, but it is already clear that it is extremely rich in species. The approximately thirty thousand species already described are likely to represent less than a quarter, possibly as little as a tenth of those which actually exist. Species of Staphylinidae have been successful in adapting to almost every terrestrial environment, from the tidal zone of the sea-shore to caves, mountain tops, and Arctic tundra, although none is truly aquatic, and the group is rather poorly represented in desert regions. Adults and larvae of most species are to be found in similar habitats, often consuming the same kinds of food. All stages tend to be hygrophilous and are mostly to be found, hidden from the casual observer, in concealed situations where at least a moderate level of moisture is guaranteed. Particularly large numbers of species are associated with the soil, humus and leaf litter, dead or dying wood, and accumulations of other decaying organic material - such as dung, carrion, decaying fruit or fungi. Water-side situations of all types support a quota of species. A good number of species are specialised inhabitants of the nests of termites or ants; others inhabit the nests of birds or mammals. Few are phytophagous, but a number are plant-climbers, mostly seeking prey which are associated with the leafy parts of flowering plants. Although many Staphylinidae are predators, feeding habits are known to vary considerably within the family. A number are scavengers or consume decaying plant material, while some are parasitoids of other insects, ectoparasites of small mammals, or are mycetophagous feeding on fungal spores or hyphae.

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Few species of Staphylinidae are of direct economic concern. However, their virtually ubiquitous presence in terrestrial ecosystems is beginning to direct attention to their role as predators, particularly when the prey are recognised pests. Other species of Staphylinidae play what may prove to be a significant part in decomposition processes — e.g. of dung (Oxytelinae) and tropical forest leaf litter (Osoriinae, etc.). As with many other insect groups the staphylinid fauna of the wet Tropics is rich, but particularly poorly known. The present check-list details records for Borneo of more than 400 species, although the number of species to be found on the island may be nearer two thousand (see Table I). Recent collections, especially those made in the Gunung Mulu National Park, Sarawak, have begun to make available for study large numbers of additional and often as yet undescribed

species. Even so, it is likely to be many years before the staphylinid fauna of Borneo is at all well known taxonomically. The present paper is intended merely to summarise the results of previous work relating to the composition of this fauna, and provide a foundation for future specialist studies.

Previous studies of Bornean Staphylinidae

Although a few of the Staphylinidae known to occur in Borneo were described (from elsewhere) by the earliest authors to take an interest in tropical Staphylinidae (Kraatz, Erichson, Motschulsky, etc.), the earliest work to specifically report a species of Staphylinidae from Borneo appears to be that of Fauvel (1878). Further studies by Fauvel (1880–1905), Frivaldsky (1883), Heller (1898) and Sharp (1899), resulted in a small extension of knowledge, but by 1910 no more than 24 species of the family had been recorded from Borneo. Moulton (1914) notes that the Sarawak Museum

TABLE I

Representation of staphylinid subfamilies in Borneo

	No. of species			
	Borneo Present check-list	Gunung Mulu Nat. Pk. collections	Estimated total for Borneo fauna	British Isles
Micropeplinae	0	0	0	5
Proteininae	1	0	1+	11
Omalinae	8	3	10 – 20	67
Piestinae	3	0	3+	1
Osoriinae	91	122	220 – 350	0
Pseudopsinae	0	0	0	1
Oxytelinae	19	64	120 – 180	87
Oxyporinae	1	0	1+	1
Megalopininae	1	1	2+	0
Steninae	25	12	40 – 80	73
Euaesthetinae	3	25	50 – 120	3
Paederinae	63	110	200 – 400	58
Staphylininae	68	69	150 – 250	179
Phloeocharinae	0	0	0	1
Tachyporinae	25	47	90 – 150	64
Trichophyinae	0	0	0	1
Habrocerinae	0	0	0	1
Aleocharinae	136	248	500 – 900	435
TOTAL	444	701	1397+ – 2237+	988