

The published descriptions raise problems of identification. Broun's account of *P. truncatus*, though far from complete by modern standards, is adequate for the identification of specimens, and reasonably certain determinations of *P. punctatus* can be made from his account in conjunction with Given's drawings. The value of Broun's descriptions of *P. frontalis* and *P. nitidulus* based on head sculpture, is doubtful for purposes of practical identification. They appear to be separable on the basis of Given's illustrations, but specimens are rare in collections in New Zealand. The description of *P. stupidus* given by Broun could be applied to any of the species except *P. truncatus*. Given (1955) states that Sharp himself considered it to be allied to *P. punctatus*. Broun (1880) concurred. In the absence of published drawings from the type, *P. stupidus* stands in the way of further progress in the systematics of the genus. It is not possible therefore to erect new species for specimens which do not fit the other descriptions, because it cannot be said with certainty that they are not *P. stupidus* without recourse to the solitary type specimen. Drawings from the type sent to me by courtesy of the Muséum National d'Histoire Naturelle indicate that even then the distinction would not always be easy to make. It is intended that the following account of the biology and taxonomic morphology of *P. truncatus* should form a basis for a revision of the genus in that it will provide details of one species with which the equivalent characters of the less common species can be compared. The value of *P. truncatus* for this purpose lies in its morphological and ecological distinctness and its wide distribution, so that it is readily available and easily identifiable.

The paper is the result of research carried out at the University of Canterbury in 1955 and at Massey College in 1960 and 1961.

#### DISTRIBUTION

*Pericoptus truncatus* (Fab.) inhabits sandy littoral areas of New Zealand from Ninety-Mile Beach to Surat Bay, near Bluff, and probably occurs throughout the country on sandy beaches where driftwood is present. Given (pers. com.) has observed it at Ninety-Mile Beach, a specimen from Dargaville is in the collection of the Entomological Research Station at Lincoln, the Auckland Museum has specimens from Muriwai Beach, Tauranga and Opotiki, and McCallum (1960) records it from Port Waikato. The collection at Plant Diseases Division, D.S.I.R., Auckland, contains specimens from Great Barrier Island, Kawhia, Devonport, Titirangi, Orewa, Ruakakea, Anawhata, Whangapoua, Whangamata, Gisborne, Taranaki, New Plymouth, Foxton and Waiterere Beach. I have, in addition, specimens from Wanganui, Takaka, Pegasus Bay, Taumutu and Surat Bay.

#### HABITAT

The habitat is fairly clearly delimited, extending from the driftwood zone above mean high-water spring, to include the line of dunes fronting the beach. Where storms carry driftwood through gaps in the dunes, the larvae are sometimes found, but they are rare on the landward face of the fronting dunes and do not seem to occur at all on dunes further inland.

Within these boundaries larvae, pupae and adults may occur at the appropriate times under any part of the surface, regardless of the presence or absence of organic matter, but they are much commoner among the roots of marram grass and occur in high concentrations under and within well anchored driftwood. Eggs have been found only in these last two situations. These situations are made attractive not only by the presence of food for the larvae, but also because