

The climate in this marlpit proved to be that of a static cold cave (Table I), the air being layered in winter: cold relatively dry air flowing in over the floor and warm damp air flowing out along the ceiling.

The bats are to be found in the entrance-part of the cave, especially in the last part of winter. They hang in the upper damp air-layer or hide in the fissures of the walls. This does not apply to the species of *Myotis emarginatus*, *M. dasycneme* and *Rhinolophus hipposideros* which can only be found in the deeper parts of the cave distinguished by more constant circumstances of temperature and humidity.

The end of the hibernation period seems to be unequal in the different species of bats (Tables II and III), some of them vanishing early in spring, others sleeping on until June. Also the length of uninterrupted sleep, therefore the frequency of awakening from sleep in winter seems to depend on the species of bats (Table IV). Especially individuals of the species of *Myotis emarginatus* are to be found in the same place in the cave for weeks or months on end in winter. It is amazing that these animals can recover from hibernation and can breed in the short summer period that remains, the new hibernation period starting already in October. It will be interesting to determine the sex of the animals with the longest sleeping time, considering that it is the males that are least burdened in summer.

ON SOME TETTIGONIOIDEA INJURIOUS TO COCONUT PALMS

by C. WILLEMSE

Through the kindness of Mr. J. J. H. Szent-Ivány, entomologist at the Department of Agriculture, Stock and Fisheries, Port Moresby Papua, I got for study a small collection of Tettigonioidae, who were injurious to Coconut Palms on different Islands of the Bismarck Archipelago, New Britain, New Ireland and Papua, belonging to the super-family Tettigoniodea (Orthoptera).

By examination they proved to be members of the fam. *Mecopodidae* and *Conocephalidae* (subfam. *Agroecinae*). Different members of the *Mecopodidae* were already known as injurious to coconut palms, such as *Mecopoda elongata* L. *Sexava coriacea* L. and other *Sexava* species.¹⁾

The result of this examination is as follows.

Fam. *Mecopodidae*: *Eumossula gracilis* Will. New Ireland area (Nasahet Island, Lihir group, July 1955, on the leaves of *Cocos nucifera*; Mahurl Island, Lihir group, July 1955; Londolovit plantation, Lihir Island, main island, July 1955; New Britain (Lowlands Agriculture Ex-

¹⁾ See: Dr. L. G. E. Kalshoven en Dr. J. van der Vecht, De plagen van de cultuurgewassen in Indonesië, I, 1950, pp. 125-137.



Fig. 1. *Pseudiniscara szentia* nov. sp. ♂ Holotype.

periment station, Kerevat and Rabaul, 26-5-1954, feeding on the leaves of African Oil palm (*Elea guineensis*) and also on coconuts in this area; Papua, Agriculture Experiment station Bulbia near Lae, defoliating the fronds of Coconut palms, 28-3-1955). *Segestidea insulana* Will. New Ireland area (Nasahet Island, on the leaves of *Cocos nucifera*, July 1955).

Segestidea hanoverana Will. New Ireland area (Tatau Island, Tabar group, Teripax (Terpax) plantation, some damage to Coconut fronds in this plantation, July 1955; New Hanover (Metakabul plantation, feeding on Coconut leaves, 21-8-1955).

Fam. *Conocephalidae* (subfamily *Agroecinae*).

Most of the members of this subfamily are omnivorous or seem to prefer a mixed diet. Little is known about the life habit of these grasshoppers.

The specimen sent to me, proves to be new to science. It is a member of the genus *Pseudoniscara* and allied to the well known genus *Salomona*.

Pseudoniscara szentia nov. spec.

Male: Size medium, form robust for the genus. Head as seen from above a little narrower than the pronotum. Frons and anterior part of cheek sparsely impresso-punctate, on the borderline of cheek and frons with some rugose ridges; between the impressed points on the frons finely shagreened, these points with their margins smooth and a little larger than those on the cheek; above the clypeal margin with an irregular, subquadrate finely shagreened area in the middle; posterior part of cheek and the vertex

with only a few impressed points on a sub-smooth surface; fastigium of vertex short, not quite reaching the middle of basal antennal joint, apex obtuse, slightly directed upwards, upper margin with a small tuberosity at the base, frontal margin flattened and somewhat convexly curved.

Pronotum seen from above, longer as broad, widened posteriorly, with some impressed points and smooth areas; anterior margin concavely truncate, posterior margin truncate; principal sulcus most distinct on the lobes; lateral lobe distinctly longer as high, lower margin gradually ascending anteriorly, nearly straight, anterior angle broadly rounded, posterior angle rectangularly rounded, posterior margin subconcave at the humeral angle. Elytra and wings well

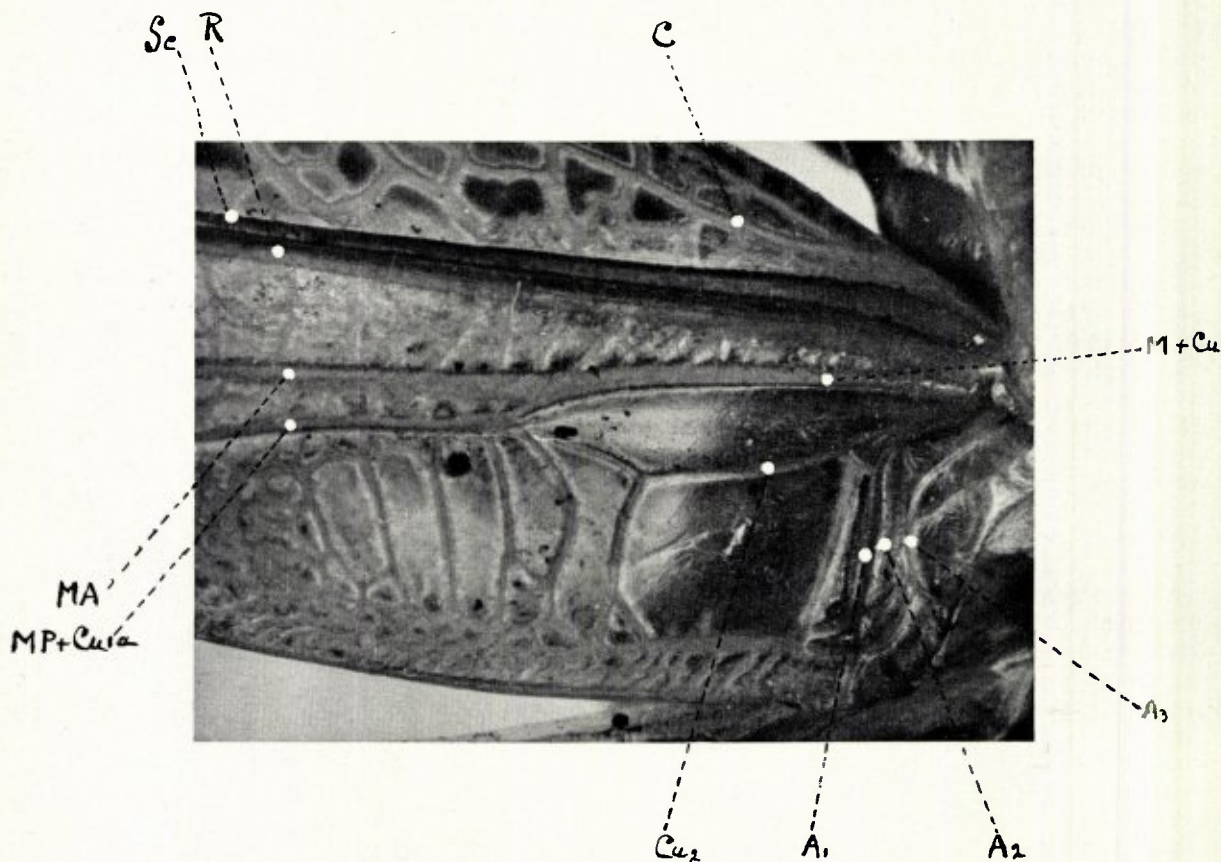


Fig. 2. Base of left elytron of *Pseudoniscara szentia* n.sp. ♂ Holotype.

C = costa, Sc = subcosta, R = radius, M = media, MA = media anter., MP = media post., Cu = cubitus, A = analis.

developed, reaching far behind the apex of hind femur. Elytron with the anterior and posterior margin nearly parallel, anterior margin in the middle subconcave, posterior margin substraight, apex broadly rounded; costa short, only visible at the base of elytron, subcosta simple, in the basal half nearly contiguous with the radius, at the top terminating into the anterior margin, a little before the top; radius in the apical third with a radial sector, which is bifurcated in its middle, near the top with two curved branches, which both reaches the anterior margin of elytron, the radius itself at its apex bifurcated; media simple, at the top dissolved into the dense reticulation, making the impression of being bifurcated; cubitus at the base connected with the media, short, straight, reaching the posterior margin of elytron about in the middle.

For the structure and venation of the base of elytron with the region of the mirror, see fig. 2.

Wing subcycloid; Subcosta straight, simple; radius with a radial sector about in the middle; media simple at the base connected with the radius; cubitus simple, there are about 8 anal veins.

Anterior femur from below on both sides with a row of 6—8 spines; inner genicular lobe with a spine. Median femur from below on the outer margin with a row of 7 spines, inner margins with 3 small basal spines, both genicular lobes with a spine. Hind femur from below with a row of 12 spines, on the outer margin, inner lower margin with a row of about 11 small spines; both kneelobes with a spine. Prosternum with two spines; anterior and posterior margin of mesosternum without spines; anterior margin of metasternum on both sides with a small spine, posterior margin without spines, but rounded.

Male: Posterior margin of penultimate tergite in the middle concavely excised; supra analplate, small, triangular, apex obtuse, disc in the middle impressed. Cercus curved, broad at the base and gradually narrowing apically, apex suddenly curved inwards, more or less truncate, with 2—3 small spines; on the inner side of the cercus with an inwardly curved, strong tooth, which at its top is more or less truncated, with the extreme top with a small sharp spine. Subgenital plate about as long as its basal width, lateral margins gradually narrowing posteriorly, posterior margin triangularly excised, styli short, straight, apex obtuse.

General coloration yellowish brown. Frons completely blackish brown to black, clypeus yellow to yellowish brown strongly contrasting, labium reddish brown, mandibles black to blackish brown, palpi yellowish brown.

Pronotum of the general coloration; lower- and part of the posterior margin itself black, disc and lobes with lighter or darker coloured parts.

Elytron brown, with the reticulation and veins yellowish brown, in the posterior part of the elytron, with some dark spots, along the principal veins. Wing subhyalinous. Femora yellowish brown, knee darker coloured, or black. Tibiae blackish to blackish brown. Mesosternum black, abdomen brown. Supra analplate in the middle of its disc blackish brown.

Length of body	45 mm.
„ „ ant. femur	14 „
„ „ med. femur	13 „
„ „ hind femur	24 „
„ „ elytron	56 „

Female unknown.

Geographical distribution: Papua (Kerema Distr., coast, Uamai village, Febr. 1955) coll. Sere May.



Fig. 3. Top of abdomen of male viewed from below (cercus and subgenital plate).

Holotype: ♂, Uamai village, coll. Dept. Agric, Stock and Fisheries, Port Moresby. The specimen was found on coconut palm. The type is unique.

Named in honour of Mr. J. J. H. Szent-Ivany, Entomologist DASF, who is studying the pests of coconut palms in this region.

Literature :

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FORAMINIFERA FROM THE CRETACEOUS OF LIMBURG, NETHERLANDS. XXXVII.

LINDERINA VISSERAE nov. spec.

by J. HOFKER

In the year 1893, Schlumberger erected the genus *Linderina* for a species from the Upper Eocene of Bruges, Gironde, France; the slightly conical test with a flattened or even concave side and a more conical side, shows very small chambers at the periphery which is somewhat lobulated, whereas the chambers are invisible more to the centre, due to a thick layer of secondary chalk which is pierced by the small but distinct pores (Schlumberger, Bull. Soc. géol. France, sér. 3, vol. 21, p. 120-123, pl. 3, fig. 7-9).

In 1950, Visser described a species from the Tuff Chalk of Maestricht under the name of *Linderina douvillei* Silvestri (Leidse geol. Mededelingen, vol. 16, p. 292-293, pl. 6, fig. 10, pl. 10, fig. 11), which species is similar with the form described by Schlumberger; moreover she discussed the possibility that the genus *Monolepidorbis* might be synonym with *Linderina*. *Monolepidorbis* has been described by Astre (1927, Bull. Soc. géol. France, sér. 4, vol. 27, p. 387-394) and that author describes two species, *Monolepidorbis sanctae-pelagiae* Astre and *M. douvillei* Astre; both species, however, are much larger than the species described by Schlumberger and Visser, and especially the chambers have much larger demensions and the whole test is different: more-

over, the embryonic apparatus of *Monolepidorbis* is a typical protoconch in the sense of *Orbitoides*, whereas the embryonic apparatus of the megalospheric form of *Linderina* shows the raspberry type as occurring in *Tinoporos* and allied genera. So *Linderina* and *Monolepidorbis* cannot be synonyms.

But the *Linderina* which in 1906 has been described by Douvillé (not in 1900 as indicated by Visser, p. 192), has been renamed by Silvestri *Linderina douvillei* (1910) and by Astre once again as *Monolepidorbis douvillei* in 1927; both names thus are synonyms, and both are erected for a specimen which obviously belongs to *Monolepidorbis* and not to *Linderina*. So the form found commonly in the uppermost Mb, the Mc and the Md, and also is common in the Kunrade Chalk, cannot be identical with "*Linderina*" *douvillei* Silvestri 1910, nor with *Monolepidorbis douvillei* Astre 1927. The species from the Tuff Chalk of Maes-

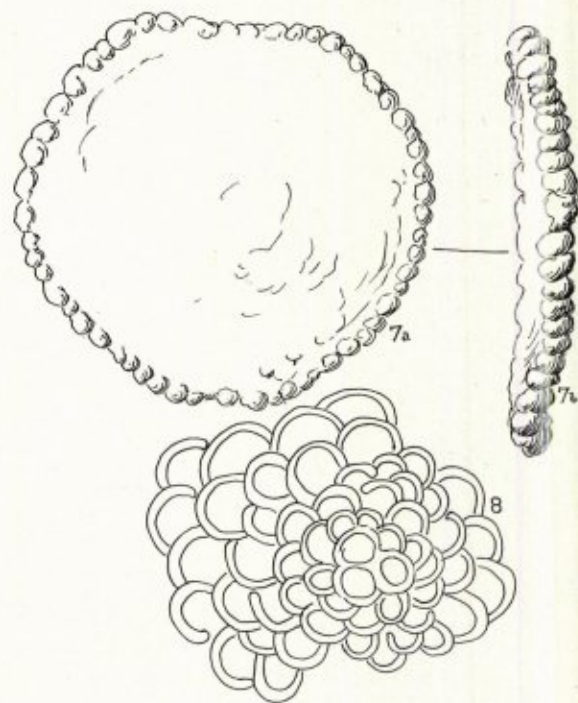


Fig. 7. *Linderina visserae*. Large specimen, from Upper Md, sample Ransdaal, quarry K 39, in hollow flint, Karweg; from two sides, flat specimen, $\times 34$.

Fig. 8. Same specimen as fig. 7, central part of horizontal section. $\times 204$.