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Insects eaten by the Karo-Batak people (A contribution to entomo-bromatology)

by

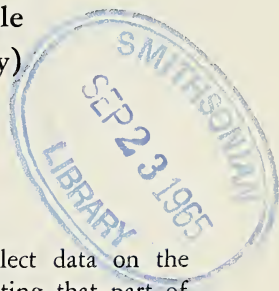
J. C. VAN DER MEER MOHR

INTRODUCTION

A long stay in the Karo-Highlands has enabled me to collect data on the insects which are used as food by the interesting people inhabiting that part of North Sumatra (see map).

The Karo-Batak people or Karonese, it may be said, have never been adverse to include insects in their diet, either as an additional supply of animal proteins and fats or as a means of flavouring the rather uniform and monotonous daily dish of boiled rice and "sajur" (cooked vegetables) or for serving both purposes at the same time. A good number of insects (or their larvae, resp. eggs) are considered merely as a dainty; as a matter of fact such species are too rare to be procured in sufficient quantity to serve as a real source of food. Moreover, the insect diet is by its very nature dependent on seasonal variation and the location of the "kampong" or native settlement (in the proximity of forest, amidst rice-fields, near a stream or lake, etc.). Furthermore, it goes without saying that in periods of food scarcity the people will resort to a diet of insects more readily than in normal times.

The Karo-Highlands, by the way, have for a long time been a rather isolated country. Not before the first decade of the 20th century the Dutch government made a serious start to open up the country by building good roads which ensured quicker transport of the products (rice and truck-crops) to the main towns and ports of Sumatra's Eastcoast. In an astoundingly short time the Karo-Highlands developed into a well-organized part of the then Eastcoast residency of Sumatra.



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Sketch-map of a part of North Sumatra. Only the main roads are shown, the railways and rivers are omitted. In the centre Lake Toba with the island of Samosir. Most data on entomophagy of the Karonese were obtained from informants living in the encircled area. Legenda: Ba — Baros; Bal. — Balige; — Bel. — Belawan harbour; Bin. — Bindjei; B. Pul. — Bandar Pulau; Br. — Brastagi; K. Dj. — Kaban Djahe; Kis. — Kisaran; K. Pin. — Kota Pinang; K. Tj. — Kota Tjane; Mar. — Marbau; P. B. — Pangkalan Brandan; Pra. — Prapat; Si. — Pematang Siantar; Sib. — Sibolangit; Sid. — Sidikalang; Tar. — Tarutung; Tj. B. — Tandjong Balei; T. T. — Tebing Tinggi.

My observations were already published long ago in *De Tropische Natuur* (lit. 5). But since that article was written in the Dutch language and whereas the said journal is not readily available, I have repeatedly been asked to publish my notes on the entomophagous custom of the Karo-Batak people in a more easily accessible journal and in a more universal language. The custom of entomophagy is nowadays dwindling rapidly, the younger and more sophisticated generations considering the consumption of insects as socially more or less degrading. However, in the remote parts of the Karo-Highlands and in the Pakpak district the people undoubtedly still adhere to a far higher degree to the eating of insects than in the parts that have had a longer and much closer contact with the lowland people. I have added some new facts which came to my notice after the publication of my first paper.

Besides the probably unintentional improvement of the protein and fat balance, there is another aspect worthy of closer investigation, viz. the real or supposed

curative and aphrodisiacal properties of the various kinds of insects. Such insects may, of course, also be included in the Karonese diet at one time or another, but this aspect does not belong to the proper sphere of entomo-bromatology.

Of other Arthropods fresh-water crabs are used for food as well; the species found in the Karo-Highlands belong to the genera *Gecarcinus*, *Telphusa* and *Paratelphusa*. As for the consumption of spiders, this was denied by all my informants. BRISTOWE (litt. 1) mentions their consumption (viz. of *Melopoeus albostrigatus* Sim. and *Nephila maculata* F.) by the Laos-people.

Sometimes the insects are eaten raw (cf. infra), but usually they are prepared beforehand in one way or the other. Generally salt and pepper are freely added during the process. Before cooking, frying or roasting the harder parts of the insects are removed. On market-days in Kaban Djahe and Brastagi a dish is sold consisting of a thick curry-soup which, apart from small fry and Odonate larvae may also include tadpoles. I have, after much hesitation, tasted this soup and its taste proved not so bad as I had expected; however, this palability should, I think, chiefly be attributed to the use of curry and a liberal addition of chillies. One morning, aroused by the chatter of my house-boy and my gardener (both Karonese), I went out into the garden and saw them busy gathering the ♂♂ and ♀♀ of a large species of *Camponotus*, engaged in their nuptial flight. While collecting them, some of the ants were eaten raw; a ♀ ant was picked from the teeming mass and, holding it by its head and thorax between thumb and forefinger, the abdomen was bitten off and munched with apparent relish.

LIST OF INSECTS*)

ORTHOPTERA

Acrididae

- Oxya chinensis* Thumb.
- Phloeoba antennata* Br. v. W.
- Gastrimargus marmoratus* Thumb.
- Catantops infuscatus* Haan
- Valanga nigricornis sumatrensis* Uvarov
- Patanga succincta* L.

Tettigoniidae (Locustidae)

- Mecopoda elongata* L.

Gryllidae

- Brachytrypes portentosus* Licht.
- Gymnogryllus elegans* Guér.
- Gryllus mitratus* Burm.
- Nisitira vittata* Haan

Gryllotalpidae

- Gryllotalpa africana* P. de B.

*) Most of the listed species have been identified by former members of the staff of the Zoological Museum, Buitenzorg (Bogor). Some Orthoptera were identified by Ir. P. A. BLIJNDORP, whilst Dr. L. KALSHOVEN identified the termite. Once more I wish to extend my thanks to all these colleagues for their kind and valuable assistance.

DICTYOPTERA

Mantidae

Hierodula vitrea Stoll.*Tenodera aridifolia* Stoll.

ISOPTERA

Termitidae

Odontotermes sp.

ODONATA

Libellulidae

Pantala flavescens F.*Tramea limbata euryala* Selys

Aeshnidae

Anax guttatus Burm.

HEMIPTERA

(HOMOPTERA)

Cicadidae

Platylomia sp.*Dundubia* sp.*Pomponia* sp.

(HETEROPTERA)

Belostomatidae

Sphaerodema rusticum F.

Nepidae

Laccotrephes robustus Stål

LEPIDOPTERA

Hesperiidae

Erionota thrax L.

Sphingidae

Acherontia lachesis F.*Acherontia styx* Westw.*Herse convolvuli* L.

Pieridae

Catopsilia sp. (prob. *pomona* L.)*Eurema* (*Terias*) sp. (prob. *hecabe* L.)

HYMENOPTERA

Formicidae

Cremastogaster vandermeermobri Men.*Camponotus* sp.

Vespidae

Vespa tropica L.*Vespa luctuosa* Sm., var. *malayana* Beq.*Provespa anomala* Sauss.*Provespa nocturna* v. d. Vecht.

Apidae

Xylocopa latipes Dr.*Bombus* sp.*Trigona* sp.*Megapis dorsata* F.*Apis* (*Sigmatapis*) *javana* Enderl.

COLEOPTERA

Dytiscidae

Cybister tripunctatus Ol.

Melolonthidae

Lepidiota stigma F.*Psilopholis* sp. (prob. *vestita* Sharp)*Exopholis hypoleuca* Wied.

Dynastidae

Chalcosoma atlas L.*Xylotrypes gideon* L.

Cerambycidae

Batocera gigas Drap.

Curculionidae

Rhynchophorus ferrugineus, var. Schach.

Remarks on the mode of preparation and some other additional notes.

In the introductory paragraph I have already stated that the main methods of preparing the insects for consumption are: cooking or boiling, frying and roasting. According to the kind of insects and the whim of the consumer some methods may be combined.

ORTHOPTERA and DICTYOPTERA. The orthopterous representatives usually are roasted after the removal of legs and wings and sometimes also of head and thorax. Of the Mantids the oothecae are broken open and the egg-mass sucked up. It is considered, especially by children, quite a delicious titbit. *B. portentosus* is much sought after, not only by the Karonese but by the Chinese and Javanese as well. Water is poured into the burrow and the escaping insect caught by hand or with the aid of a small bamboo-sheath. *G. africana* makes superficial burrows; these are laid bare till the insect is found.

ISOPTERA. The adults are collected during swarming and eaten in either fried or roasted condition. They are highly esteemed. While collecting a few may be eaten raw as a titbit.

ODONATA. As far as I could ascertain the larvae serve as food, the adults not being bothered about in this respect. The larvae are prepared in a way as described on p. 103.

HEMIPTERA. Cicades caught by means of a thin flexible stick ("lidi"), one end of which is dipped into a sticky substance. After removing the wings they may be fried or simply roasted. Both *Sph. rusticum* and *L. robustus* are eaten in either fried or roasted condition though more often than not a thick decoction is made to be poured over the dish of rice.

LEPIDOPTERA. The rather large, white-powdered caterpillars of *E. thrax*, the banana leafroller, are sometimes eaten by the Karonese; also the pupae may be eaten. With regard to the Sphingids, the pupae, after being roasted, are eaten as a titbit. Of the three species, mentioned in the list, *H. convolvuli* is the commonest. According to personal information from the late Mr. H. J. NEUMANN, who for a life-time worked as a missionary among the Karo-Batak people, the pupae of *Catopsilia* and *Eurema* (*Terias*) are used as food. The caterpillars of both kinds of Pieridae are serious defoliators of leguminous trees (*Cassia*, *Albizia*). It may be mentioned here that the monkey *Macaca irus* F. Cuv. is very fond of the larvae and pupae of *E. thrax*; these monkeys are equally fond of the larvae of the Pyralid *Sylepta derogata* F., a leaf-roller of the common *Hibiscus rosa-sinensis* L. and other Malvaceae.

HYMENOPTERA. The cardboard nests of *Cr. vandermeermobri* are smoked out, and after the bulk of the disturbed ant-population has left the nest, it is cut open and the eggs, larvae and pupae sifted and collected. These are pounded up into a mash to which salt, pepper and chillies are added; this mash is used as a "sambalan" — a kind of condiment of variable composition — to flavour the rice-meal. A large Camponotine ant is also used for food (cf. introductory paragraph). Of the four Vespidae, mentioned in the list, the larvae and pupae are eaten after having been prepared in the same way as the larvae and pupae of the honey-bees. These are cooked together with onions, chillies and some other condiment while salt is added during the process of preparation. At times the larvae and pupae are eaten, after being killed in hot water, with the sugared milk ("santen") of a coconut. One of my informants, a native of Sibolangit, assured me that, when eaten raw, the larvae and pupae are also very palatable. The honey, of course, is the most desirable product of the bees; it is also esteemed as a medicine. A rather important market-place for honey (and bees wax) is Sibolangit. Here, not only honey of *M. dorsata* and *A. javana* is sold but, occasionally, the honey of *Trigona* is offered for sale too; however, people do not prize the rather dark *Trigona*-honey so much. If, more or less by chance, the nest of a bumblebee is discovered, the nest is dug out on account of the larvae and pupae and the stored honey. I have seen one of my native collectors eating the larvae raw. When it happens that some decayed beams or house-posts have to be renewed, they may be searched for the brood of the common carpenter bee, *X. latipes*, living in cells in the tunnels these bees excavate in wood.

COLEOPTERA. Larvae and adults of *C. tripunctatus*, which are caught — together with Odonate larvae — when one is fishing for small fry, are eaten. Of the adults head and thorax are carefully removed before preparation since these parts render a bitter taste to the prepared stuff. The adults of the three species of Melolonthids are considered a welcome addition to the regular Karonese diet. After removal of the harder parts the beetles are cooked or fried. Their larvae, too,

are esteemed; before preparing them for food the blackish and unappetizing posterior part of the abdomen is pinched off. I once witnesses a Karo-Batak woman shaking the branches of a so-called cherry tree (*Muntingia calabura* L.). It was plain that she did this to collect in an easy way the adults of *Ps. vestita* which dropped to the ground. Asked for what purpose she collected the beetles, she told me that the beetles were intended to serve for her meal. She added that if she could collect quite a large number of beetles, part of them she would offer for sale on the market because people like them. Larvae, pupae and adults of the Dynastids, mentioned in the list, are eaten, but since both species are far from common they should be regarded as merely providing a titbit. Apart from *B. gigas*, of which the larvae and pupae (and perhaps the adults too) are eaten, it is probable that the larvae (and/or pupae) of other Cerambycids are also consumed. I have been told by my informants that in such cases the choice depends on the kind of tree in which the larvae of those species live. *R. ferrugineus*, var. Schach is a well-known pest of the coconutpalm. Larvae and pupae are eaten. However, we have to bear in mind that the coconut palm does not thrive well above 700 m and the use of the said Curculionid species for consumption is therefore restricted to the area below that altitude, Sibolangit forming its centre.

Summary

During a long stay in the Karo-Highlands (see map) the author has collected data on the insects, used as food by the Karo-Batak people. A list of these insects is given. Moreover, the author also remarks in some detail on the mode of preparing the insects for consumption.

Literature

Apart from the publications cited below one should consult the extensive bibliography in BODENHEIMER (F.S.): Insects as human food, The Hague, 1951, p. 331—350. Not mentioned in this bibliography is a paper of GIBBS, AGCAOILI & SHILLING and BURKILL's Dictionary (cf. *infra*).

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