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DOES HIRNEOLA AURICULA-JUDAE OCCUR IN MALESIA?

D. RANGKUTI * & MIEN A. RIFAI
Herbarium Bogoriense, Bogor, Indonesia

SUMMARY

Examination of all collections of *Hirneola* preserved in Herbarium Bogoriense indicates that *Hirneola auricula-judae* does not occur naturally in Malesia. Previous records of this species from this region are shown to be misdetermination.

The Jew's ear *Hirneola auricula-judae* (Bull. ex St. Amans) Berk. — which is also well known under various other names such as *Auricularia auricula* (L. ex Hook.) Underw. apud A. R. Northrop, *Hirneola auricula* (L. ex Hook.) H. Karst., *Auricularia auricula-judae* (Bull. ex St. Amans) Wettst. or *Auricularia auricularis* (S.F. Gray) G.W. Mart. — is a temperate jelly fungus often found growing on *Sambucus nigra* in Europe. Since until quite recently the characterization of this species was chiefly based on gross morphological features, it is not surprising that its occurrence in Malesia had been frequently noted, especially in the older literature (cf. Chipp, 1921; van Overeem & van Overeem-de Haas, 1922; Teodoro, 1937). The fact that Holtermann (1898) erroneously considered all species of *Hirneola* to be mere forms of a very variable species does not help in straightening out these old records. Van Overeem (1927) and Ochse (1931) included *Hirneola auricula-judae* as one of the vegetable products of Indonesia used by the population for culinary purposes. More recently Thomson & Lim (1965), Bisema (1968) and Suriawiria (1969) stated that this species can be found locally.

Boedijn (1940), on the other hand, excluded *Hirneola auricula-judae* from the list of fungi occurring in the Krakatau area and reidentified the specimen recorded previously as belonging to *Hirneola nigricans* (Sow. & Hook.) Graff., a species common in the tropics and usually known as *Auricularia polytricha* (Mont.) Sacc. Furthermore Boedijn (1959) con-

* Present address: FIPIA, Universitas Andalas, Padang (Sumatra), Indonesia.

cluded that *Boletus quintus auris murina* of Rumphius (1750), interpreted earlier as " ..... can scarcely be other than the common and widely distributed *Hirneola auricula-judae* ....." by Merrill (1917), was also based on *Hirneola nigricans*. According to the map prepared by Lowy (1952), the area of distribution of *Hirneola auricula-judae* is restricted to temperate areas, namely Europe, China and North America. In view of these conflicting records and opinions, a critical examination of over 125 collections of *Hirneola* preserved in Herbarium Bogoriense and collected over the period of eighty years from various parts of Malesia (fully documented by Rangkuti, 1971) was undertaken, to ascertain whether or not *Hirneola auricula-judae* grows naturally in this region.

Since there is a possibility that the true *Hirneola auricula-judae* occurs only in Europe (Donk, 1966; Duncan & Macdonald, 1967), a European specimen (on *Sambucus nigra*, Lathkill Dale, Derbyshire, England, *M.A. Rifai*, BO 18378) is used for comparative purposes as a reference collection of this species. As Lowy (1951, 1952) has already shown, *Hirneola auricula-judae* can be characterized microscopically by the absence of a distinctly differentiated medullary layer in the context of its fruit bodies. The context itself is somewhat compact and made up of hyphae which are parallel in orientation.

About 60% of the Malesian collections studied were found to have context with a distinctly developed medulla composed of a dense and even more compacted layer of hyphae running parallel with the hymenial surface. Some of these specimens were identified by van Overeem as *Hirneola auricula-judae*, but in fact they are referable to *Hirneola fusco-succinea* Mont. and *Hirneola nigricans*. The former species has thinner fruit bodies and medullary layer as well as shorter hairs. It is probable that other species not recognized by Lowy (1951, 1952) may be involved here, such as *Hirneola porphyrea* (Lév.) Fr. as redescribed by Boedijn (1940).

The remainder of the Malesian specimens examined have a context without a differentiated medullary layer. Unlike that of *Hirneola auricula-judae*, however, this context is composed of loosely interwoven hyphae not clearly organized in parallel bands. Moreover their hymenial surface is not smooth as in *Hirneola auricula-judae* but irregularly folded and appearing reticulate, meruloid or even poroid. These features fall into the concept of *Auricularia delicata* (Fr.) Henn. as this species is understood by Lowy (1951, 1952). In the light of the outcome of the fertility and sterility tests undertaken by Duncan & Macdonald (1967) between different regional strains of *Hirneola auricula-judae*, it is preferable to follow Donk (1952) in referring the Malesian collections to *Hirneola affinis*

(Jungh.) Bres. which was originally described from Java, rather than to *Auricularia delicata* the type locality of which is Africa.

The result of the present observation seems to indicate that *Hirneola auricula-judae* should be excluded from the list of Malesian fungi. Since certain industrial enterprises are planning to cultivate *Hirneola* in Central Java using introduced species from temperate regions (probably encouraged by the successful establishment of a mushroom industry in the Dieng Plateau using the introduced *Agaricus bisporus* (Lange) Singer), it is considered worthwhile to publish this short note to record the fact that until now *Hirneola auricula-judae* does not occur naturally in *Malesia*. What apparently occurs in this region is a complex mixture of taxa of dubious status and confused nomenclature that needs a thorough taxonomic overhaul.

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