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NOTES ON NEPENTHES (NEPENTHACEAE) I. CONTRIBUTIONS TO THE FLORA OF SUMATRA

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SUMMARY

Nepenthes pectinata Danser is shown to be based on mixed specimens belonging to two other previously validly described taxa (viz. *N. gymnamphora* and *N. singalana*). It is reduced here and the syntypes are referred to the respective valid taxa. A new species of *Nepenthes* from Taram, Central Sumatra, *N. adnata*, is described.

INTRODUCTION

Recent reinvestigations of the localities of some species of *Nepenthes* (Nepenthaceae) as well as examination of dried specimens and the respective literature have disclosed some inadequacies in the former views concerning species limitations and determination.

Nepenthes pectinata Danser

When Danser (1928: 350) described his *Nepenthes pectinata*, he based it on several not quite identical syntypes. Even the accompanying illustration (p. 351) is composed of three different numbers so as to give no hints at which specimen should be typical *N. pectinata*. Study of the original material at L and BO made clear that *N. pectinata* was based on specimens of two different species described validly previous to Danser's publication. Thus, *Nepenthes pectinata* Danser is reduced here to these two taxa.

Most of the syntypes belong to a species with ovoid pitchers and a finely striate peristome: *N. gymnamphora* Reinw. ex Nees (1824: 366), originally described from Java and known to occur in S Borneo and Central Sumatra, too. The best specimens and the most representative ones belong to *Bünnemeijer 700 bis* from G. Talakmau, held at L and BO. The sheet HLB 920.256-172 (L) is selected as the lectotype of *N. pectinata* here.

The other species has pitchers infundibuliform in the lower part and constricted (sometimes only slightly so) and tubulose in the upper part with a coarsely ribbed peristome pectinate at the inner margin: *N. singalana* Becc. (1886: 12).

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The respective specimens are:

***Nepenthes gymnamphora*:**

Bünnemeijer 700 bis (L, BO), lectotype: HLB 920.256-172 (L); *747* ? (stated to be at BO but not seen there); *763* (*963* on the sheet at L, BO); *854* (L, BO); *938 bis* ? (stated to be at BO but not seen there); *10271* (BO).

***Nepenthes singalana*:**

Bünnemeijer 3897, 4028, 4114, 4115 (all BO); *Schiffner iter indicum 1990* (WU, L, BO); *1991* (L, BO) ? (very bad specimens without pitchers only).

There is no single sheet with both species on it, and all of the typical material can be assigned to one of the species without great difficulty. Doubtlessly, Danser thought the different pitcher types to occur on different (short or long) shoots of a single plant. Actually, *N. gymnamphora* and *N. singalana* do frequently grow together, but the different pitcher types occur always on different plants; they can always be separated and have little morphological overlap.

Danser described two putative hybrids involving his *N. pectinata*. *Nepenthes pectinata* × *N. singalana* Danser (1928: 353), based on *Bünnemeijer 4113* (BO), belongs to *N. singalana*. *Nepenthes bongso* × *N. pectinata* Danser (1928: 274), based on *Pringgo Atmodjo 176* (BO) from Gajo Loeëus, Aceh, N Sumatra, has infundibuliform pitchers without tubulose part and is thus quite different from both *N. gymnamphora* and *N. singalana*. *Nepenthes bongso* Korth. (1839: 19) and *N. gymnamphora* have not been found as far north as the Gajo lands. Another species fits the description and especially the specimens quite well: *N. densiflora* Danser (1940: 268), described a couple of years later without mentioning the dubious hybrid.

Thus, the problematic species *N. pectinata* can be resolved into much better circumscribed units. The following can replace the respective passage in Danser's key (1928: 258) from 48 on:

48 Pitchers of the rosettes and short shoots ovoid. Peristome finely ribbed **N. gymnamphora**

(48) Pitchers of the rosettes and short shoots infundibuliform at least in lower part, not ovoid. Peristome coarsely ribbed and pectinate at inner margin 49

49 Pitchers infundibuliform throughout, not tubulose in upper part **N. densiflora**

(49) Pitchers constricted above basal infundibuliform part and tubulose above **N. singalana**

The opinion (Tamin & Hotta, 1986: 98) that *N. gymnamphora* sensu Danser p.p. (Sumatran specimens) and other species (*N. carunculata* Danser and *N. spathulata* Danser) should be lumped together with *N. singalana*, differs grossly from our views, especially when the respective type specimens are considered. Tamin and Hotta cite, under *N. singalana*, a number of specimens from Aceh obviously belonging to *N. densiflora*, but this name is not noted in the whole report. Apparently, the authors intended to unite this species with *N. singalana*, too.

Nepenthes adnata Tamin & Hotta ex J. Schlauer, *spec. nov.*

Nepenthes adnata Tamin & Hotta in M. Hotta, Diversity and dynamics of plant life in Sumatra: 76, nom. inval.

Foliis basin versus caule adnatis et ascidiis cum operculo superne tentaculatis *Nepenthes tentaculata* Hook. f. affinis, sed differt margine foliorum brunneo-puberulo, ascidiis tubulosis, operculis rotundatis non ellipsoideis nec rhomboideis.

Folia mediocria sessilia, late sed breviter decurrentia, non petiolata sed ellipsoidea, nervis longitudinalibus utrinque 3–4(–5) distinctis, vagina 0; ascidia rosularum oblonge-ovata, 3–4 cm longa, ventricose inflata apicem versus sensim angustata, alis 2 fimbriatis. Peristomium tenue, cylindricum, dense striatulum, non interne dentatum. Operculum vix cordatum late ovatum usque ad rotundatum, subtus glabrum et planum, glandulis minutis multis demersis obsitum, superne pilosum, tentaculis filiformibus sparsis praecipue costam versus obsitum. Costa parva recurva, vix ab operculo dilatata. Ascidia superiora ut ascidia rosularum sed partes inflatae et constrictae longiores, ea re ascidia tubulosa, 4–8 cm longa.

Inflorescentia racemus depauperatus sparsiflorus, pedunculo longitudine internodiorum, floribus 4–8 compositus. Pedicelli uniflori 0.5–1 cm longi. Indumentum marginis foliorum notabile pilis fascicularibus compositum, brunneo-fulvum. — Holotypus: *W. Meijer 6941* (L, sh 958.85-512), 24.viii.1957, W Sumatra, Taram, E of Payakumbuh, sandstone region of river Tjampo on ridge c. 1000 m altitude.

This species was known to be new since Tamin and Hotta's paper (1986: 76), and specimens of it were available to them, but nevertheless *N. adnata* Tamin & Hotta remained an invalid name until now. It is most closely related to *N. tentaculata* Hook. f. (1873: 101) known from Borneo and Celebes, but it markedly differs from it in the dense brown indumentum of the leaf margins and the very broadly ovate to rotundate lid. The inflorescence (at least what is known of it up to present) seems to be even poorer than that of *N. tentaculata*. The affinities to *N. gracillima* Ridley (1908: 320) and to *N. gracilis* Korth. (1839: 22) as discussed by Tamin and Hotta (1986: 78) seem to be less marked. The former has much narrower, not broadly decurrent but amplexicaul leaves. The latter differs in that the narrowly decurrent wings of each leaf almost reach the node beneath. The occurrence of tentacles on the upper surface of the lid is not exhibited by all individuals. Interestingly, this also applies to *N. tentaculata* and its relative *N. hamata* Turnbull & Middleton (1984: 108).

Field note – Collar glistening dark violet, inner side of pitcher blue green, outer side dark violet veined.

Representative specimens: Sumatera Barat,Kelok Sembilan, 20.ix.1985, *M. Hotta 31301* (Univ. Andalas, KYO), *R. Tamin 1262, 1623* (Univ. Andalas, BO, KYO).

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