

NOTES ON GUIANA DROSERACEAE

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A study of the Suriname species of the genus *Drosera* revealed the existence of a few problems and led to some new points of view with regard to the taxonomy of the tropical American species of this genus. A discussion of these problems (and an exposition of my views) including the description of a new species, are given in the following pages.

According to the "Enumeration of the vascular Plants known from Surinam", published by A. A. PULLE in 1906, no species of *Drosera* were at that time known from Suriname. In the same year L. DIELS published his monograph of the *Droseraceae* in "Das Pflanzenreich". He mentioned from Guiana the following species: *Drosera sessilifolia* St. Hil., *D. cayennensis* Sagot ex Diels, *D. capillaris* Poir., *D. montana* St. Hil. var. *roraimae* Diels and, with some hesitation, *D. pusilla* H.B.K. and *D. tenella* Willd. Consequently at least part of these species were to be expected from Suriname. Investigation of herbarium specimens revealed a great confusion, especially with regard to the species *D. pusilla* H.B.K., *D. tenella* Willd. and *D. capillaris* Poir. At a first glance hardly any difference seemed to exist between *D. pusilla* and *D. tenella*, as the diagnostic characters, mentioned by DIELS, viz. length and number of peduncles, proved to be of no value. After examining the type collections of these two species however, a real difference, which proved to have been mentioned already by KUNTH, was found in the seeds. *D. pusilla* has subglobular and foveolate seeds, whereas the seeds of *D. tenella* are ovoid, longitudinally ribbed and papillose. In the general appearance of the plants another difference was found: the flowers of *D. tenella* proved to be proportionally smaller and the peduncles more slender and usually somewhat longer than in *D. pusilla*. When *D. pusilla* is defined in this way, it appears that it is up till now only known from Venezuela and Brazil, and not from Guiana.

The next problem regarded the differences between *D. tenella* Willd. and *D. capillaris* Poir. According to DIELS and other authors, the principal differences are to be found in the hairiness of the petiole, in the size of the plants and in the number of flowers. Examination of herbarium specimens showed that these characters are not at all constant; and that intermediates between *D. tenella* and *D. capillaris* exist. Besides, it proved to be impossible to find a difference between

the seeds of these two species. As the seeds of the *Drosera* species were generally found to possess constant and reliable specific characters, *D. tenella* Willd. and *D. capillaris* Poir. are to be considered conspecific and as the name *Drosera capillaris* Poir. has priority, this combination will have to be retained.

In the author's opinion *D. tenella* var. *esmeraldae* Steyerm. (described by Julian A. STEYERMARK in *Fieldiana Bot.* Vol. 28, n. 2, 1952, p. 244) from Venezuela, cannot belong to this species as its seeds are not papillose but marked with pits that are more or less arranged in rows.

Drosera capillaris Poir. must be considered the most common species of this genus in Suriname. This was recognised also by MAGUIRE who, however, identified the species incorrectly, using the name *D. pusilla* (Bull. Torr. Bot. Cl. 75, 1948, p. 642).

A species new for this region (known already from Europe, Eastern North America as far southward as Texas, and from Cuba), and rather frequent, is *Drosera intermedia* Hayne. In Suriname it has been collected three times by Lanjouw and Lindeman in 1948, along the Moengo tapoe line.

Maguire 24432 and 24486 (collected on Mt. Tafelberg in 1944) were incorrectly identified as *D. capillaris*; both collections belong to *D. intermedia*.

D. capillaris and *D. intermedia* are well characterized by their mature seeds (clearly figured in a drawing published by F. E. WYNNE in Bull. Torr. Bot. Cl. 71, 1944, p. 173). The seeds of the latter species are irregularly and densely papillose and those of the former corrugated papillose, the papillae being arranged in longitudinal rows. It is noteworthy that *D. intermedia* may have pink and purple flowers and that it is not, as usually mentioned, always white-flowered.

Drosera cayennensis Sagot ex Diels, described by DIELS from French Guiana, has only once been collected in Suriname. The species is characterized by its glandular pilose peduncles, its oblong, erect and glandular, pilose sepals and by its leaves being glabrous beneath.

Maguire and Fanshawe collected in 1944, in the Kaieteur savanna in British Guiana, a plant which was identified by L. CROIZAT, according to the label, as *D. cayennensis*. It does not belong, however, to this species from which it differs by the withered sepals becoming recurvate, by the presence of long hairs on the abaxial side of the petiole and along the margin on the lower side of the leaf, and by the apiculate and reticulate seeds. Consequently this specimen must be regarded as belonging to a new species:

***Drosera kaieteurensis* nov. sp.**

Caulis brevissimus. Folia rosulata conferta patentia. Stipulae membranaceae, basi petiolo adnatae, ceterum fere in segmenta 3 linearilanceolata partitae, 3–5 mm longae. Petiolus planus, 3–10 mm longus, subtus villosus. Lamina rotundato-obovata, subtus marginem versus villosa. Pedunculi et pedicelli nunc pilis longioribus crispatis et pilis glandulosis brevioribus conspersi, nunc glabrescentes. Sepala villosa glandulosa ovata acutiuscula, plm. 3 mm longa, post anthesim apice recurvata. Styli 3, e basi bipartiti; stigmata paulum incrassata (plm.

capitata). Semina ovoideo-subglobosa, apiculata, nitida, circ. 0.3 mm longa.

Typus: Maguire and Fanshawe 23466 in herbario NY; duplicato in herbario K — Guiana britannica in Kaieteursavanna.

It appeared that this species has already been collected during the last century, but not recognised as a distinct species. E.g. the following herbarium specimens, studied by the present author, belong to it: Im Thurn (1878) in K; Jenman n. 912 and 1293 (1882) in K, all from the Kaieteur savanna; herb. Trin. n. 14932 and 15084 in K from Trinidad, Steyermark n. 59970 and 6049 in F from Venezuela.

STEYERMARK described (in *Fieldiana Bot.* Vol. 28 nr. 2, 1952, p. 243) a new species named *Drosera sanariapoana* Steyerm., which, however, in my opinion, is identical with *D. cayennensis* Sagot ex Diels. As a difference between his new species and this one he mentioned less hairy and longer peduncles and sepals. Two specimens of his collection, however, viz. the above mentioned n. 59970 and 6049, which has been labelled *D. cayennensis*, turned out to belong to another species, viz. to *D. kaieteurensis*. Examination of the type specimens of *D. cayennensis* and *D. sanariapoana* showed that they are conspecific, so that the latter name must be regarded as a synonym.

Another plant, which is known from Mt. Roraima and can possibly be expected in Suriname, is *D. montana* St. Hil. var. *roraimae* Diels. The species is, according to DIELS, represented by 6 varieties; four of them are recorded from South Brazil, and two from Mt. Roraima, viz. var. *roraimae* Diels and var. *robusta* Diels (*Notizbl. Berlin VI.* 54, 1915, p. 136). These two varieties seem to be identical and the latter may therefore be considered a synonym. A more detailed study will be needed to decide whether the var. *roraimae* and the four varieties recorded from South Brazil, really belong to one and the same species. Their geographical distribution seems to show a noteworthy disjunction.

This investigation has been carried out at the Botanical Museum and Herbarium of the State University Utrecht (Director: Dr. J. LANJOUW). I wish to express my sincere thanks to the directors of the herbaria at Chicago, Kew, Leiden, München, New York and Paris for the loan of herbarium specimens. I especially want to acknowledge the valuable information which I received from Mr. N. Y. SANDWITH (Kew) with regard to these plants.

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