

ORCHIDACEAE

NOTES ON THE DISINAE FOR THE FLORA OF SOUTHERN AFRICA

While checking the account of the Disinae for the *Flora of southern Africa*, the following problems requiring discussion or resolution were found.

1. *Disa* subgen. *Micranthae* has not been validly published. In a previous account (Linder 1981: 9) I referred to a 'subgen. *Micranthe*', but did not indicate the type or basionym. *Disa* Berg. subgen. *Micranthae* (Lindl.) Linder, stat. nov., *Disa* Berg. sect. *Micranthae* Lindl., Gen. Sp. Orch. 347 (1838). Lecto-type species: *Disa chrysostachya* Swartz.

2. *Disa* subgen. *Hircicornu* (Kraenzl.) Linder is based on *Disa* sect. *Hircicornes* Kraenzl. I changed the ending of the name in 1981 in order to satisfy Recommendation 21 B 1 of the ICBN (1978), which states: 'The epithet of a subgenus or a section is preferably a substantive. . .'. However, article 73.1 states that 'The original spelling of a name or epithet is to be retained, except for the correction of typographic or orthographic errors'. *Hircicornu* cannot be regarded as having an 'incorrect Latin termination', which can be corrected. Recommendation 21 B 2, stating that new epithets for subdivisions of genera should have the same form as already existing names of co-ordinate rank, implies that the epithets are not to be 'corrected', so the correct name of the subgenus would be *Disa* Berg. subgen. *Hircicornes* (Kraenzl.) Linder.

3. *Disa longicornu* L.f. is the correct spelling of what all subsequent authors (except Linder 1982), have called '*Disa longicornis*', according to article 73.1 of the Code.

4. *Disa maculomarronina* is the name that McMurtry (1984) gave to a population that Linder (1981: 146) described, but did not name, as a hybrid between *Disa versicolor* and *D. hircicornis*.

Taxonomically, this is a difficult species. *Disa maculomarronina* can readily be separated from *D. hircicornis* by the petals which curve over the anther, and which are ovate and acute, and it can be separated from the South African collections of *D. versicolor* by its constant colouration and only gradually decurved spur. However, the material of *D. versicolor* from Zimbabwe is problematic, as in spur shape and orientation it ranges from *D. maculomarronina* to *D. hircicornis*, it is generally robust as in *D. versicolor* and according to various reports, the colouration is as in *D. maculomarronina*. The type of *D. versicolor*, which is also the only collection from Angola, is the same as the South African *D. versicolor* in all respects. The resolution of the problem in Zim-

babwe will probably have to wait until the populations can be studied in the field.

5. *Disa patens/filicornis*. The nomenclatural history of these two quite distinct species has been much confused. The problem dates to the early history of the usage of the names (Table 4).

The diagnoses and typification of the names of Linnaeus the Younger, despite his incompetence at the generic level, are clear and sound. Thunberg (1794), in his *Prodromus*, transferred *Ophrys patens* L.f. to *Serapias*, but from his diagnosis ('*Serapias foliis lanceolato-setaceis, spica ovata, floribus perpendicularibus*') it appears as if he is referring to *O. filicornis* L.f. For *Orchis filicornis* he published a new, superfluous name, *Limodorum longicorne*, which refers to a *Mystacidium*.

The confusion started with Olof Swartz's (1800) treatment of the group (Fig. 16). In his paper, he lists the species with their synonyms indented, and with descriptions provided as footnotes. New names are printed in italics, while everything else is in roman type. He clearly followed the circumscription, rather than the typification method of nomenclature, and he also recognized the two species. However, following the circumscription method, he placed *Serapias patens* sensu Thunberg in the same species as *Orchis filicornis* L.f. (from their description they are the same), under the name *Disa patens*. He is consistent throughout his paper, preferring Thunberg epithets (usually superfluous) to those of Linnaeus the Younger or the Elder. Consequently 'patens' is printed in roman type, as Swartz regarded it as a 'new combination', not as a new name. However, as Swartz explicitly excluded the type of *Serapias patens* (which is *Ophrys patens* L.f., which Swartz placed into the other species), by the type method 'he is considered to have published a new name that must be ascribed solely to him' (ICBN, 1983, article 48.1), so it should read: *Disa patens* Swartz. Further support for the notion that Swartz regarded *D. patens* as a 'new combination' is the fact that Swartz nowhere in his paper replaced earlier names with 'more appropriate' names, the way that Thunberg did.

For *Ophrys patens* L.f. Swartz proposed a new name, *Disa tenuifolia* Swartz. This name can be regarded as being superfluous, the correct name being *Disa patens*, which was being blocked simultaneously by being erroneously applied to *Orchis filicornis*. This appears to have been the interpretation of all authors to date. The other possible interpretation is that it is an avowed substitute (nomen novum), as there is already a *Disa patens*. This latter interpretation seems better. Swartz, using the circumscription method, and consistently preferring the last epithet applied to a species, would have regarded *Serapias patens*, and hence *Disa patens*, as the 'correct' name for *Orchis filicornis*, thus blocking *Disa patens* (L.f.) Thunb., a later homonym for *Disa patens* Swartz, which Thunberg established in his *Flora Capensis* of

TABLE 4.—Application of early names of *Disa patens* and *D. filicornis* based on the names and types of Linnaeus the Younger

L.f. (1784)	<i>Orchis filicornis</i>	<i>Ophrys patens</i>
Thunberg (1794)	<i>Limodorum longicorne</i>	<i>Serapias patens</i>
Swartz (1800)	<i>Disa patens</i>	<i>Disa tenuifolia</i>
Thunberg (1807)	<i>Disa filicornis</i>	<i>Disa patens</i>
Lindley (1838)	<i>Penthea filicornis</i>	<i>Penthea patens</i>

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D. tenuifolia Sw.	patens.
	Serapias Th.
Ophrys patens	Orchis filicornis
suppl.	suppl.

3. SATYRIUM. (THUNB.) Tab. III. C.

Char. essent. *Calyx* ringens: foliolo superiore fornicato, postice bicalcarato, ceteris labelloque basi coalito.
Anthera stylo elongato adnata sub *Stigmate* terminali.

Charaeter naturalis.

Calyx ringens, 5-phyllus:

Foliola omnia basi coalita. Tria exteriora, quorum unum superius f. posterius maximum, fornicatum, basi Calcaria duo variae longitudinis postice exserens; duo anteriora, lanceolato-linearita.

Duo interiora minora stylo foliolisque exterioribus basi accreta.

Cor.

D. tenuifolia: galea acuminata erecto-patens concava ecalcarata, labello filiformi; caule subbifloro, foliis fetaceis.

D. patens: galea acuminata erecto-patens concava ecalcarata; labello filiformi; spica ovata multiflora; foliis lineari-lanceolatis.

FIG. 16. — The treatment of *Disa tenuifolia* and *D. patens* by Swartz. The synonymy and names are given at the top of the page, new names are printed in italics. The diagnoses are given at the bottom of the page.

1807, a work in which he ignored Swartz's earlier work. Unfortunately, authors in the 19th and 20th centuries managed to get the names confused. Lindley (1838) transferred both *Ophrys patens* and *Orchis filicornis* to *Penthea*, a treatment followed by

Rolfe (1913). However, Schlechter (1901), Kraenzlin (1900), Bolus (1911) and Linder (1981, 1982) mistakenly upheld *Disa patens* Swartz, a name which is clearly superfluous, and so illegitimate. Linder (1985) interpreted *Disa tenuifolia* Swartz as superfluous, and proposed *D. lutea* Linder as an avowed substitute, a name which would now have to be regarded as superfluous.

The full synonymy of the two species is now:

1. *Disa filicornis* (L.f.) Thunb. (1807); *Orchis filicornis* L.f. (1784); *Limodorum longicorne* Thunb. (1794); *Disa patens* Swartz (1800); *Penthea filicornis* (L.f.) Lindl. (1838). *Penthea reflexa* Lindl. (1838); *Disa reflexa* (Lindl.) Reichb.f. (1865).

2. *Disa tenuifolia* Swartz (1800); *Ophrys patens* L.f. (1784); *Serapias patens* Thunb. (1794); *Disa patens* (L.f.) Thunb. (1807) non Swartz (1900); *Penthea patens* (L.f.) Lindl. (1838); *Disa lutea* Linder (1985).

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