

Many new discoveries from South America have become more readily available in recent years, the smaller Chilean species being of interest to most collectors, large and small.

Unfortunately there is very little published information available covering Neoporteria and allied species - Chileorebutia, Neochilenia, Horridocactus and Pyrrhocactus. The diversity of opinion amongst respected authorities regarding nomenclature of this group is most confusing.

In Autumn 1965 a study group for Neoporterianae was founded by Messrs.J.D. Donald (Member IOS), D.Whiteley and H.Middleditch (England), Dodonaeus (Belgium) and Dr.E.Priessnitz (Austria) to exchange information on this group of plants. We now invite other collectors who are interested in Chilean plants to participate in this activity, in any of the following ways:

1. Exchanging information on any aspect of cultivation, growth, flowering, or visual characteristics of these plants.
2. Lending slides of plants in flower for copies to be made, or contributing slides, to a pool which will (in due course) be circulated to all subscribers.
3. Completing "Observation Records" from plants you observe in flower or fruit; we hope that collated results from these records will help to clarify the present confused nomenclature.
4. Offering any of your spare plants or seedlings or seeds for sale or exchange.

Our bulletin, "The Chileans", will be issued four or five times a year. Bulletins now in the course of preparation or envisaged are:-

- (a) A schedule of most known Neoporterianae with common synonyms.
- (b) A description of the climate and topography of cactus country in Western South America.
- (c) Translations of some excellent articles from Continental journals.
- (d) Lists of Neoporterianae imported privately, as they arrive.
- (e) Information from contacts now being established in Chile.
- (f) News and Views from overseas participants.

In addition to the bulletin a "Round Robin" will be circulated amongst those wishing to exchange information on any aspect of Neoporterianae. If you would like

like to add any comment or contribution on receipt, it will be very welcome; if you just wish to learn more about these plants, you are no less welcome.

A sample "Observation Record" form is enclosed with this bulletin. Copies are available from Mr. A. J. S. McMillan, 5 Oakfield Road, Bristol 8, for completion and return to our collator, Mr. D. Whiteley, 112 Moore Road, Mapperley, Nottingham.

The National Cactus & Succulent Society is offering full support to this venture but their financial commitments for this year will not allow them to cover the cost of our bulletins, etc. If you would like to contribute 10/6 per annum to the inevitable expenses in reproducing "The Chileans", Observation Records, postage etc., please send your subscription to the group organiser, Mr. H. Middleditch, 5 Lyons Avenue, Hetton le Hole, Co. Durham. You will then receive "The Chileans" (including information on plants available for sale or exchange), and Observation Record forms. The collated Observation Records will be available for perusal, you will be able to borrow the colour slides, and your name will be placed on the "Round Robin" circulation list.

An Introduction to the Neoporteriae

The Neoporteriae group of plants includes the species Neoporteria, Pyrrhocactus, Horridocactus, Neochilenia, Chileorebutia and Reicheocactus. There is considerable divergence of opinion amongst respected authorities regarding the nomenclature of this group. Some would place all in one omnibus genus - Neoporteria: others recognise one of the above species but not another, and so on.

An ordinary Member of our Society might well expect that the known characteristics of the plant would determine its genus by accepted standards of botanical demarcation, but in practice this ideal state does not exist. Since Botany is far from an exact science, the interpretation of observable plant characteristics - as to what is important and what is not - is very often a matter of intuition and personal leanings. For example, one authority will make much of woolly fruits, another authority will completely ignore them, and so on.

However, against this background, there are some fundamental concepts which cannot be ignored. The basic botanical justification for a separate genus is a distinct difference in the morphology or function of a primitive organ e.g. fleshy or dry fruits, floral pattern, seed morphology, etc. The importance to be attached to differences in these primary characteristics should be governed by their relative transition. If there is a clear and abrupt change it is important and forms a sound basis for the establishment of generic status. If there is a gradual transition from one characteristic to another, it is far less important.

When one considers secondary characteristics, e.g. short or long fruit berries, naked or fluffy berries, long or short tubed flowers, some authorities would use differences of this rank to establish separate genera, others sub-genera, whilst others would not divide them at all. If differences in these characteristics are distinct and without indefinite transition from one to the other, they can and should be used.

It might be of interest to note that such secondary characteristics are used in separating many groups of cacti, but very rarely, if ever, in other (non-succulent) plant families. Pure botanists - as opposed to cactophiles - would snort at some of the differentia used by cactophiles.

The history of these genera starts in 1922 when Britton and Rose separated a number of Echinocactae into their new genus *Neoporteria*, named after Carlos Porter, a Chilean entomologist, all the plants being natives of the northern half of Chile.

In 1929 Berger established the genus *Pyrrhocactus*, based on *Pyrrhocactus Straussianus*; the generic name refers to the flame coloured flowers of rich yellow typical of the genus. This flower colour (compared with the typical pink of *Neoporteria*) together with a habitat in Argentina - east of the Andes - separated this genus from *Neoporteria*.

In 1934 Friš proposed the genus *Chileorebutia*, based on the *Echinocactus Reichii* (K. Sch.) in the Berlin Dahlem herbarium. Kreuzinger later published a botanically valid withdrawal of the genus *Chileorebutia*; unfortunately, the illustration accompanying his article showed not the *Echinocactus Reichii* (K. Sch.), but the 'false' *Echinocactus Reichii* (Hort Heese) which was and still is of unknown origin, but was found in the collection of Herr Heese. Ritter endeavoured to re-establish the genus *Chileorebutia*, but his description partly confused the 'false' *Echinocactus Reichii* (Hort Heese) with *Echinocactus Reichii* (K. Sch.). There is still no botanically valid publication of the genus *Chileorebutia*.

In 1937 Backeberg established the genus *Horridocactus* for those *neoporteria*-like plants found in Chile with flowers more nearly resembling in form those of the *Pyrrhocactus* of Argentina.

Also in 1937, Backeberg established the genus *Chilenia*, on what was subsequently shown to be an invalid basis. In 1942 Backeberg, apparently unaware of the valid publication by Bullock of the genus *Nichelia*, established the genus *Neochilenia* to replace *Chilenia*. Backeberg now evidenced the greater amount of wool on the flower tube and the presence of bristles on the upper part of the tube (both retained on the fruit) as the basis for his genus *Neochilenia*. Upon this basis, many other plants must be transferred to *Neochilenia* which are described by other authors as *Horridocactus*, *Pyrrhocactus*, *Neoporteria*, or *Chileorebutia*.

Backeberg later created the genus *Reicheocactus* for the false *Echinocactus Reichii* (Hort Heese) since it had no bristles on the flower tube, in distinction to *Echinocactus Reichii* (K. Sch.). However, when Ritter rediscovered *Echinocactus Reichii* in 1956, he observed that in their habitat some plants had flower tubes with bristles and some without. This observation spotlights the basic doubts surrounding the Backeberg system for the division of *Neoporteria*.

We may summarise the present genera as follows:-

Neoporteria. Pink flowers, often with darker midrib, reflexed outer petals, recurved inner petals; stalky, nearly naked, flower tube; relatively small flowers not opening wide. Fruit fleshy, elongated, nearly naked.

Pyrrhocactus. Rich yellow flowers (often with darker midrib), funnel shaped, wide opening, cream style; flower tube short urn-shaped \pm hairy and

bristly: relatively large flowers. Fruit dry, round hairy and bristly.
Horridocactus. Yellow or pale rose flowers (often with darker midrib),
funnel shaped, straight tapering flower tube, relatively large flowers
not as wide opening as Pyrrhocactus. Pink style. Flower tube \pm hairy
and bristly. Fruit dry, elongated.

Neochilenia. Pale yellow or pale rose flowers (some with darker midrib),
funnel shaped, not as wide opening as Pyrrhocactus; flower tube
more hairy and bristly than Horridocactus. Fruit dry, elongated,
hairy and bristly.

Reicheocactus. As Neochilenia but nearly naked flower tube.

Chileorebutia. Bodies with small, rounded tubercles with small to
insignificant spines. Fruit ripens after seeds leaving seeds in upper
part of fruit. Ripe fruit breaks off plant, blown about by wind and
only then spills seeds.

While it will need considerable study by accepted botanical authorities to
disentangle the present situation, the exchange of information within the Society's
Neoporteriae group may help to give their collectors a little more understanding of
these compact and intriguing plants.

H. MIDDLEDITCH.

(With acknowledgements to Mr. J.D. Donald
for most of the basic data).

News & Notes

We have heard from a correspondent in New Zealand who has about 70
Neoporteriae in his collection, mostly grown himself from Ritter's seed.

Dr. Boom, editor of the Dutch Society Journal "Succulenta" tells us that he
feels that the division of the Neoporteriae should be into Neoporteria with fleshy
fruits, and Pyrrhocactus with dry fruits, replacing all other generic names.

The March issue of "Succulenta" features Neoporteria laniceps (FR.483),
discovered by Fr. Ritter in January 1956.

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