Gaultonia

The Newsletter of the Manchester Branch of the
British Cactus and Succulent Society

Vol 2 No 3. April 2002

THE GENUS REBUTIA - PART 2

Continuing the review of the Rebutias, I will move into the sections Mediolobivia and Digitorebutia. Modern thinking has now lumped these two sections into one under the first name and there has been a considerable reduction in the accepted names. From several points of view these sections contain interesting plants. First they do not grow as large as some from the Aylostera group, dealt with in the last edition. They can be highly floriferous, so much so that the plant bodies can be totally invisible beneath the floral mass. Their bodies are often very dark to an almost black-green coloration, often finger-like in appearance. Most importantly for many, they grow much more slowly than the general Rebutia, often not outgrowing the 4-5 inch pot range for many years.

In recent years an IOS/Cites checklist has appeared (1992). It was compiled by David Hunt of Kew. It has brought many howls of disagreement but in general terms it has probably done the genus Rebutia a good turn. There were many superfluous names doing the rounds which have now been reduced to synonymy. I have grown many of these plants and noticed how similar they were to one another.

Mediolobivia, as I knew it, consisted of a single group, namely R. aureiflora with its varieties. Latest thinking states that the group is:,
R. **aureiflora** plus the forms 'kesselringiana', 'nidulans' and 'sarothroides'. The form 'nidulans' is distinctive with lovely long spination. It is more columnar and less freely clumping, bearing the beautiful yellow flowers for which the group was originally named. I was brought up on the name **Digitorebutia** for all the rest of the section.
Rebutia atrovirens has had a chequered career from its first description in 1935 but it now harbours many plants that were erected to species status. They are 'haefneriana', 'huasiensis', 'pseudoritteri', 'raulii', 'ritteri', 'yuncharasensis' and 'zecheri'.

Rebutia einsteinii and its variety **gonjianii** are particularly desirable plants. Slow growing, variable and clustering, stems may reach a length of 6 inches. The variety can be tricky to grow. It has a very narrow stem, rarely exceeding 1.5 cm. Yellow flowers of a rich hue are the normal colour.
Rebutia brunneoradicata is not a plant I have grown and reportedly it is hard to find true specimens for sale. It clusters making nice plants bearing carmine to red inner petals and darker outer petalled flowers.
Rebutia euanthema and variety **tilcarensis** are typical of the digit forming bodies but they have longer white interlacing spines. Flowers are red with a reddish yellow throat.
Rebutia leucanthema is one of the few to stand by itself. It is one of the few white flowered species, though it occasionally has pale pink flowers. It clusters sparingly. The white flowers against the dark body make a handsome sight.
Rebutia mixticolor is a slow growing plant that will be no more than a hand sized clump of short stems after ten years. The flowers are a mixture of colours, hence the specific name, orange-red and purple on a paler pinkish yellow base.
Rebutia nigricans is another plant to have had a chequered career. It is taller growing and laxer than many in the series. It also has three forms that were previously species in their own right, 'albispina', 'carmeniana' and 'peterseimii', all marginally different.
Rebutia pauciareolata is close to both atrovirens and pygmaea but slowly spreads sideways from the base rather than offsetting from and above the base. The name implies insignificant areoles and little wool.
Rebutia paucicostata is very close to pygmaea and will almost certainly finish up in the large conglomerate group. Flowers are more orange than many in this section.
Rebutia pygmaea has found a huge number of once separate species lumped together under its umbrella. It was first discovered in 1922 by Fries. Here follows a list of the plants included here; 'atrovirens' (not to be confused with the previously mentioned plant) a lemon flowered specimen, 'canacruzensis' with pale pink flowers, 'colorea' well worth growing for its beauty, 'crassa' larger growing than the type, 'diersiana' with deep golden yellow blooms, 'elegantula' with smaller stems and salmon coloured flowers, 'eos' a beautiful, much sought after species which is often badly misidentified. I have had many named eos but only one true specimen. We continue with 'friedrichiana' which makes a large plant in time and produces copious orange red blooms, 'haagei' with many somewhat conical heads, 'iscayachensis' somewhat similar to colorea, 'knizei' sparingly clustering bearing bi-coloured yellow flowers, 'minor' the smallest of the variations with dark stems and clear yellow blossoms, 'mudanensis' with white spines and fatter stems that cluster only slowly, 'nazarenoensis' similar to the previous plant, with more prominent tubercles, more outstanding spines and darker flowers, 'orurensis' having flowers with two zones of colour, 'pallida' having pale orange-yellow flowers that pale even more into the throat, 'pelzliana' having stems 3 cm tall 2 cm wide and 13 ribs, 'polypetala' bearing many petalled flowers orange-red in colour, 'tafnaensis' sparingly clustering, 'violaceostaminata' with grey-green globose stems bearing violet tints, 'violascens' often wrongly labelled as this are plants truly belonging to the atrovirens group; true plants have wide pale pinkish red blooms. A truly large homogenous group but well worth growing some to see the subtle variations.
Rebutia steinmannii is another grouping that has seen previously 'good' species subsumed into it. These include 'applanata' a small clustering, flattish form,

'brachyacantha' smaller than the type, densely clustering and with orange flowers, 'carmargoensis' has tall wide stems with longer more erect spination, 'christinae' has orange flowers but the exterior of the petals are pink with a greenish white midstripe, 'cincinnata' making low clusters without central spines, 'costata' with its low, deep green stems and wide orange red, carmine tipped petals, 'leucacantha' a plant that has only recently become available to the ordinary hobbyist, 'major' which is larger growing than the type, 'melanocentra' collected in 1987 but not yet commercially available, 'parvula' a delightful variation with yellowish-white, nearly pectinate spination, 'rauschii' small growing with correspondingly smaller flowers, 'tuberculata' its ribs distinctly divided into tubercles and unavailable commercially at present.
Rebutia torquata has defined, sometimes twisting ribs and short spines that do not overlap. The blooms are a fiery red which pale to yellow in the throat.
Rebutia tropaeolipicta shows close affinities to the pygmaea group and may well find itself reduced to synonymy there before too long. An often misspelt plant, tropaeoli means nasturtium red and picta means coloured with reference to the flowers.

There is no doubt that this is a delightful section of the Rebutias to grow. Around nurseries and collections (as in my own) the 'old' names will persist. It is interesting to grow the various 'forms' to see the intergradations that occur.

Watch out for red spider amongst plants in this group. In fact spray three or four times a year with an insecticide which clearly states that it deals with red spider. Should you have the misfortune to find the pest has already taken up residence, usually noticeable by pale brown marking near the crown where the epidermis is softer, or by seeing the fine webbing spread across the spines, with minute red dots moving across the silken threads, then immediately put the plant into isolation. Spray it heavily with insecticide, check and spray as a precaution, if clear, other plants that have enjoyed close contact with the infested plant. Spray again 14 days later to kill any mites that have hatched from eggs in the intervening period. Only return to the fold when you are sure the problem is solved.

If you would like to know more than I have been able to tell you in the space available then read **"REBUTIA" by John Pilbeam** from whence has come much of my knowledge to back up years of personal experience. I have grown them for nigh on 40 years. Ask the committee if you would like to see this edition added to our library.

Opuntia Unravelled - Part 2.

By Ivor Crook

They say a week is a long time in politics. In the February edition I wrote part 1 of this article concentrating mainly on the South American genera. This classification was based mainly on Ted Anderson's 2001 book 'The Cactus Family'. However, this week sees the publication of 'Studies in the Opuntioidiae' edited by David Hunt. Much of what has gone before is now out and a new order prevails!

Anderson quotes a paper by Rob Wallace and Steven Dickie in his book which is the first paper in this latest tome from Succulent Plant Research. The authors examine DNA evidence of opuntia evolution to produce a new classification for this group of plants. There conclusions form a middle ground between extreme splitters such as Ritter and Backeberge and the other extreme lumping of placing everything in the one genus - Opuntia.

DNA evidence, so I understand, is proposed to give the most accurate evidence on evolution and therefore classification in plants. A sequence of DNA is examined from the same portion of the DNA in a group of plants. The theory states that related plants will have the same sequence of DNA base pairs for much of their length. Mutations that occur in the DNA sequence that are shared by a group of plants, by the law of averages should occur once and once only. So plants that share the same mutation in the DNA sequence are related. Over many generations as new species emerge, many new mutations occur. Comparing the mutations, in effect, leads to a family tree for a group of plants. The authors of this new paper suggest the Opuntioidiae, in their broadest sense, are now divided into 5 tribes.

As already suggested the genera Maiheunia and Pereskia are not part of the Opuntioidiae. Probably the most primitive members of the subfamily is the Tribe Austrocylindropuntioidiae. This includes the plants currently classified as Austrocylindropuntia and Cumulopuntia (including C spherica).

Tribe two is the genus Pterocactus. Seven closely related species with unique floral structures and winged seeds probably represents an early divergence from the early opuntiae.

Tribe three, Cylindropuntieae. This includes the primitive genus Quiabentia, the more modern genus Pereskiopsis and then on to the North American Chollas, Cylindropuntia and finally Grusonia (Corynopuntia, Marenopuntia and Micropuntia). As with the genus Mammillaria, this is one of the few tribes within the Cactaceae to span Central America and have a foothold in both the Northern and Southern American continents.

Tribe four, Tephrocactaceae includes the genera Tephrocactus and Maiheuniopsis from South America. Clear lines between these genera can still not be drawn.

Finally, tribe five, Opuntioideae. This 'catch-all' hotch potch contains all the left-overs which seem to be surprisingly closely related. It includes Miquelopuntia (a solitary species from the Andes), Tunilla (the new name for Airampoa), Brasilopuntia (flat padded Brasilian opuntia), Nopalea, Tacinga (transitional fatter stemmed opuntiae from Brasil including T. inamoena) and Consolea.

Studies in the Opuntioidiae edited by David Hunt and Nigel Taylor comprises 255 pages and contains six further articles It is available direct from David Hunt, The Manse, Chapel Lane, Milborne Port, Sherbourne DT9 5DL for £20 plus £3 postage and package.