

# Moroccan Stapeliads

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Fig. 1 below: *Orbea decaisneana* Mirleft S. of Agadir.

Fig. 2 right: same species with  
*Euphorbia echinus* Oued Ouarksiz, S. of Sidi Ifni.





About twenty years ago my father offered me his whole collection of the old French magazine "Cactus". Reading through many articles in these journals, I came across an article from 1956 talking about *Caralluma hesperidum* Maire. At the time, I knew little about asclepiads, and this article awakened in me great curiosity about this family of plants. At the time I was living in Morocco. Learning that this plant grew in that country, I decided to look for it, and so what started as a simple interest in asclepiads, developed into a real passion.

Morocco is very poor in succulents. One of the reasons cited by climatologists to explain this phenomenon is that the climate changed too quickly over the course of the last millennia. In fact, the moist tropical climate, which until recently (in geological terms) predominated in North Africa and the Sahara, changed rapidly to an arid or semi-arid climate, giving plants insufficient time to develop succulence.

Nevertheless 5 stapeliads have been counted up to now: *Orbea decaisneana* (Lemaire) Bruyns, *Caralluma burchardii* N.E. Br. subsp. *maura* (Maire), *C. europaea* (Guss.) N.E. Br. var. *europaea*, *C. joannis* Maire and *C. munbyana* (Decaisne) N.E. Br.

### *Orbea decaisneana* (Lemaire) Bruyns. (*Caralluma hesperidum* Maire)

Among the 5 Moroccan species, this is the only one which can be distinguished from the others by its vegetative characteristics. In fact the stems are cylindrical, with conical protuberances (figs. 3 and 4). In the other 4 species, the stems are square with the angles more or less wavy, and so cannot be identified unless they are in flower.

*Orbea decaisneana* can be found in the south of Morocco, along the coast from Essaouira to Sidi Ifni, and up to 150 km inland (Aoulouz). One locality was found in the Eastern Rif Mountains by Font-Quer







Fig. 3 above: *Orbea decaisneana* Mirleft, S. of Agadir. Fig. 4 inset above: *Orbea decaisneana* JAA 211 Gorges Massa, Oumahrrouz. Fig. 5 right: *Caralluma burchardii* in cultivation.

in 1929, but this was a relic population. This plant often grows with *Argania spinosa* (Sapotaceae), *Senecio anteuphorbium*, *Warionia saharae* (Asteraceae) and *Acacia gumifera* (Mimosaceae). It enjoys the humidity near the coast where it is locally abundant. *O. decaisneana* is not difficult to find as it often grows out in the open (figs. 1 and 2 previous page). As it is poisonous, it does not suffer from overgrazing. This species is the most common in our collections, as it is easy to grow.

***Caralluma burchardii* N.E. Br. subsp. *maura* (Maire) Meve & Albers**

*C. burchardii* can be found on the Canary Islands. *C. burchardii* ssp. *maura* differs in the flowers which are







Fig. 6 above: *Caralluma burchardii* ssp. *maura* & *Euphorbia echinus* Mirleft, S. of Agadir. Fig. 7 left: Same species with *Kalanchoe laciniata* ssp. *faustii* Oued Ouarksiz S. Sidi Ifni Maroc.

on pedicels and smaller (fig. 5). This species can be found on the Atlantic coast from north of Agadir to Oued Noun. The associated vegetation is composed principally of *Euphorbia echinus* (south of Agadir), *E. officinarum* (north of Agadir), *E. lamarckii*, *Argania spinosa*, and *Kleinia anteuphorbium*. Unlike *Orbea decaisneana*, which is poisonous, *C. burchardii* ssp. *maura* is not only appreciated by the goats and sheep, but equally by the Berber tribes, who eat the young shoots. It is a more difficult plant to find in habitat. You have to look in spiny bushes or in tufts of *Euphorbia echinus* (figs. 6 & 7). Seeds falling into these formidably spiny clumps can thus germinate sheltered from predators. *C. burchardii* ssp. *maura* also has the ability to send out underground runners that emerge from the ground in





Fig. 8 above: *Caralluma europaea* W. of Taфраout Anti-Atlas.  
 Fig. 9 right: *Caralluma europaea* Bert Jonkers 217 Aoulouz S. of Haut-Atlas.

the rainy season. Only those emerging in the middle of a clump of vegetation armed with spines have any chance of survival. The cultivation of this plant does not seem to pose any particular problems.

***Caralluma europaea* (Guss.) N.E. Br. var. *europaea***

The area of distribution of this plant is vast. It can be found from Morocco to Israel, and in Spain and on the island of Lampedusa where it was first discovered by Gussone in 1832. In Morocco, it can be found in the same habitats as *Caralluma burchardii* ssp. *maura*, as well as inland in the Anti-Atlas, Middle Atlas and the Rif (fig. 11 right). This asclepiad, with square-section stems with wavy angles, cannot be differentiated from *C. burchardii* subsp. *maura* in habitat. Only the floral characteristics differ. The flowers are very variable, especially in Morocco. The size of the corolla can vary from 0.7 to 2 cm diameter and the hairs can be more or less dense. The markings go from completely plain to striped. This floral polymorphism has resulted in the discovery of numerous variations between plants or populations and explains why Maire described so many varieties in the 30's.

I was able to visit several localities, particularly Taфраout in the Anti-Atlas (fig. 8 above and fig. 12 page 26) details of which were kindly given to me by Bert Jonkers in 1997. The flowers in this population







are particularly big (1.7 cm diameter) and beautiful (fig. 10). I also looked in the forest of Admine, south of Agadir, but in vain. The recent construction of an international airport, and the expansion of agriculture, have so destroyed this forest, that it no longer protects the town of Agadir from sand storms coming from the Sahara.

The locality at Aoulouz, at the foot of the High Atlas in the Souss Valley, is especially interesting, as 3 of the 5 asclepiads of interest to us can be found there: *Caralluma europaea* var. *europaea* (fig. 9 left), *C. joannis* and *Orbea decaisneana*.

Although this plant has a wide area of distribution, it is very localised and difficult to find.

It has no particular cultural requirements.

Fig. 10 left: *Caralluma europaea* JAA 197 W. Tafraout Anti-Atlas in cultivation. Fig. 11 on p. 26 shows the habitat. Fig. 12 below left: same sp. Rif N. of Morocco. Fig. 13 right: *Caralluma joannis* Aoulouz, S. of Haut-Atlas.

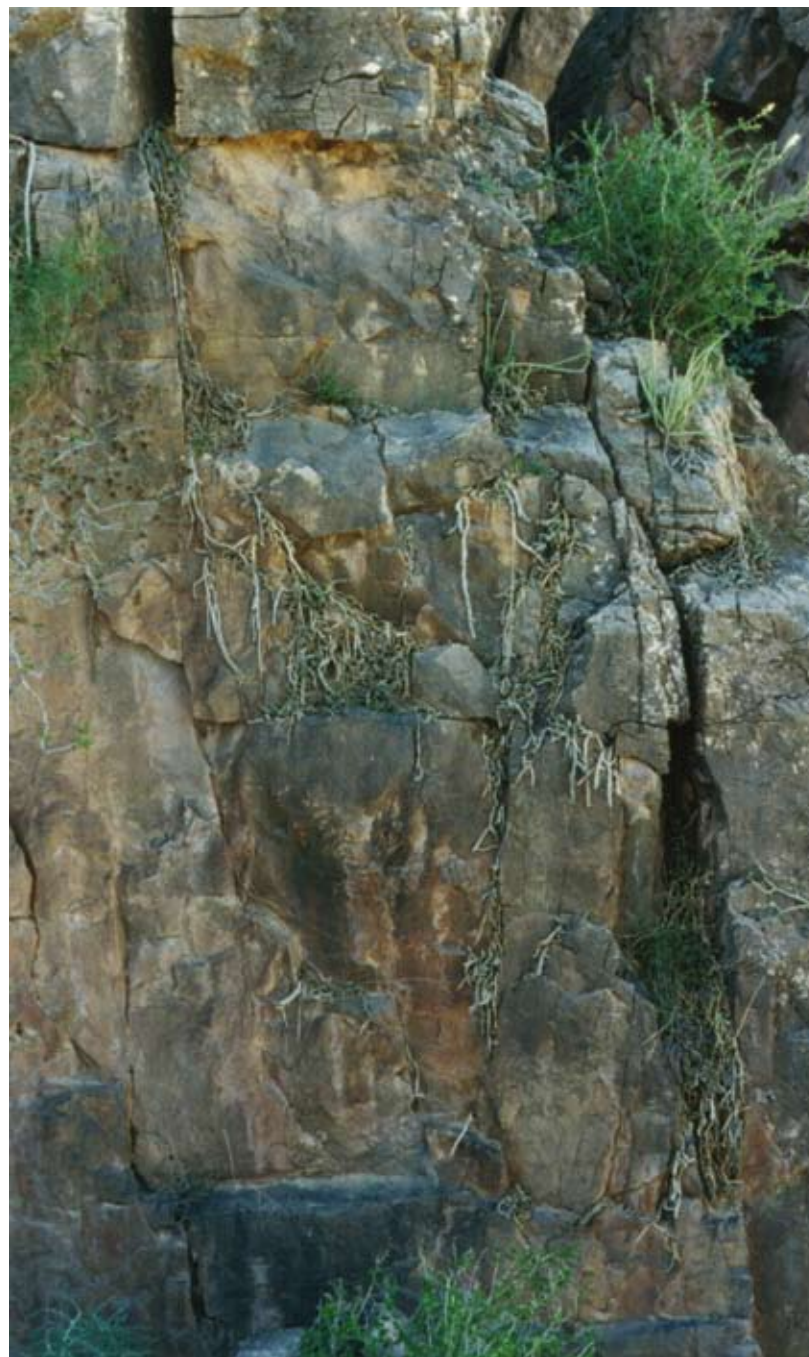










Fig. 14 above left, *Caralluma joannis* Aoulouz, S. of Haut-Atlas; Fig. 15 right: Same species S. of Haut-Atlas.  
Figs. 16 & 17 below left, same species in flower Aoulouz S. of Haut-Atlas; right: Same species JAA 207 in cultivation.

### ***Caralluma joannis* Maire**

This endemic species was discovered in 1933 and described by Maire in 1940. The locality in Aoulouz seems to be the only known one up to today.

*C. joannis* is a tall plant, the four-angled shoots can reach 1 m in length (fig. 14). The inflorescence is sub-terminal, consisting of 2 to 10 flowers with a very unpleasant smell (figs. 16 and 17). This rock-dwelling species grows on vertical cliffs and tends to be pendant (figs. 8, 9 and 12).

The development in cultivation of stolons could indicate that *C. joannis* once grew (probably long

ago) on less vertical places with more ground cover, at a time when overgrazing was less of a problem. In fact the plants growing in the rock crevices hardly produce stolons. We are therefore looking at the last remaining traces of this remarkable species (no doubt originally much less widely distributed than *C. europaea*) rather than an adaptation to a particular habitat.

It is without doubt an easy species to grow.

### ***Caralluma munbayana* (Decne.) N.E. Br.**

This species can also be found in Spain and Al-







Fig. 20 *Caralluma munbayana*

JAA 224, Hellin, in cultivation.

Facing page. Fig 18 Above: Tafraout,

Anti-Atlas, habitat of *C. europaea* - see p. 23.

Fig. 19 Below: *Caralluma munbayana* Hellin Spain.



geria. In Morocco, it grows in the extreme north-east of the country, in the region of Oujda. Not having been able to get to this locality, in the winter of 2000/2001, I looked for it in Spain, and found it in the province of Murcia. It is a difficult plant to find as it is hidden in clumps of *Stipa* sp. (fig. 19 left). At this time of the year temperatures were fairly low and the soil was being soaked by frequent showers. One would therefore assume that a plant growing in such conditions would be tolerant in cultivation. In fact I have found it the least easy of all those mentioned in this article.

The flowers of *C. munbyana* are very different from those of other species of this type. The tube is very short and the lobes are linear-lanceolate (fig. 20 above).

### ***Caralluma mouretti* Chevalier = *C. edulis* Bentham & Hooker**

Its existence in Morocco needs further investigation before it can be confirmed. In 1997, D. C. Plowes asked me to contact one of the people in Mauritania, with whom he had been in correspondence, to re-

start research into this plant. It seems that even down there it has not been found for a long time.

### **Bibliography**

- Audissou J-A. (1994) - Redécouverte de *Caralluma joannis* Maire. *Cactus Aventures*, **23** : 19-21  
Audissou J-A. (1996) - *In Situ* : notes complémentaires sur *Caralluma joannis* Maire, *Cactus Aventures*, **29** : 20-21  
Audissou J-A., Delanoy G. & Manetti M. (1998) - *Caralluma joannis* en culture. *Succulentes* **1** : 3-8  
Berthet P. (1987) - A la découverte des *Caralluma* d'Espagne, *Succulentes* **2** : 3-5  
Albers F. & Meve U. (2002) - Asclepiadaceae. Illustrated Handbook of Succulent Plants 46-63, 191  
Jonkers B. & Walker C.C. (1993) - The Asclepiads in Morocco. A short commentary. *Asklepios*, **59** : 14-21  
Maire R. (1940) - *Caralluma joannis* Maire, n. sp. *Bull. Nat. Afr. Nord*, **31** : 27-28  
Marnier-Lapostolle J. (1956) - Les Stapéliées. *Cactus*, **52**: 127.  
Raynaud (1988) -Thèse Univ. Montpellier : 199-235  
White A. & Sloane B.L. (1937) : *The Stapeliae* (ed.2), Abbey San Encino Press, **vol. 1** : 1-407