Euphorbia horwoodii S. Carter & J. Lavranos

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Somalia is very appealing to many lovers of succulent plants for various good reasons. Somalia is a very difficult and dangerous travel destination and yet it is the natural habitat of a great number of rare and difficult to cultivate, oddly shaped and ultra succulent plants of various plant families. *Whitesloanea crassa*, (N.E.Br.) Chiov. once believed extinct and then rediscovered, is just one example. More interesting for us is that the family of the Euphorbiaceae also contains some very special jewels originating from Somalia. To name just a few; *Euphorbia turbiniformis* Chiov., *E. atrox* F.K.Horwood and *E. ponderosa* S.Carter. Also *Euphorbia horwoodii* belongs to this small group of species.

Fig. 1: This represents the best known clone of Euphorbia horwoodii *in cultivation with solid branches and with the band forming pattern.*

Fig. 2: The same clone of Euphorbia horwoodii *as in Fig. 1 with somewhat older cyathia on fairly long peduncles and with the very young fruits emerging*

Fig.3: Again here is the same clone as pictured in Fig. 1, showing the long pedicel with the fruit curved backwards.

Frequently found in succulent literature

In various articles one can read about how this species was found by the late Frank Horwood (Carter 1978). The stunning difference between the juvenile spherical and the mature shrubby appearance of *Euphorbia horwoodii* is legendary and rarely seen in the botanical world. Almost all plants found in nature had the shape of a ball with a flattened apex (Fig. 4). Only rarely was a plant found with a shrubby appearance. Oddly enough the situation in cultivation is just the other way round. Nearly all euphorbia-lovers have never seen a spherical *Euphorbia horwoodii* in the flesh.

When one has a good look at a juvenile *Euphorbia horwoodii*, one can clearly see the side-branches on the sphere, or better said, see the place where the side-branches should be. It looks as if the side-branches are pressed into the sphere. The spine shields easily come off and often are totally absent. The resemblance with *Euphorbia turbiniformis* is striking. As soon as such a plant comes into cultivation, or I assume in nature under more favourable conditions, the side-branches start growing and it evolves into a sparingly branched spiny shrublet. The branches are relatively thick and sturdy and have a marvellous colour pattern, which also adds considerably to its popularity amongst growers of euphorbias.

Natural habitat

Euphorbia horwoodii is closely associated with the famous grower of succulent plants Frank Horwood. However it is most likely that Frank Horwood is not the discoverer of the plant that bears his name. It is John Lavranos who earlier found just one spherical plant 55 kilometres south of Garoe, and which could possibly represent *Euphorbia horwoodii* (Horwood 1976). This single plant however died during the journey. So we will never be sure and so this find never went into the books as *Euphorbia horwoodii*.

Later, during the same trip, Frank Horwood again found a spherical *Euphorbia* 50 kilometres east of Sinugif. Initially it was believed to be a form of *Euphorbia turbiniformis* and surprisingly it received not much attention. Only a few plants were collected and given the collection number Lavranos & Horwood 10153. Just one plant was found, which had left the spherical phase behind and had grown into a shrublet. At that time it was thought to be a hybrid, which seemed very reasonable at the time. *Euphorbia horwoodii* appeared to grow in a vast area as it was found again at a 300 kilometres distance in another locality. This locality is 90 kilometres southwest of Isskushuban and here the type material was collected, Lavranos & Horwood 10188.

Fig. 4: A juvenile plant of E. horwoodii showing paired spines and the first markings of developing branches. This picture was taken by John Lavranos 50 km NW of Eyl.

Fig. 5: A grafted plant of Euphorbia horwoodii *B&L 689*

Fig.6: The differing grey form with the collection-number B&L 887, which I also acquired with the wrong name Euphorbia horwoodii *(picture Henk Viscaal)*

Observations in cultivation

What is written above is just a short extract of all that has been written over a few decades about *Euphorbia horwoodii* in succulent literature. As this has already received its deserved share of attention, this was not the purpose of this article. There are a few points about the existing plants in cultivation labelled as *Euphorbia horwoodii* which should be brought to the attention of the interested grower of euphorbias.

Three different forms

The oldest and most widespread form in collections of *Euphorbia horwoodii* is characterized by its thick and sturdy branches with a very striking colour pattern. The rounded branches have vertical rows of spine shields joined by a dark olive green band. In cultivation in a sunny position or under some degree of stress the branches tend to colour purple. The flowers are formed on fairly long peduncles. Because I assume this plant was the first one to be in cultivation of the three forms I want to discuss here that it most likely originates from one of the two localities visited by John Lavranos and Frank Horwood in 1973.

In 1985 and 1986 a bigger group visited Somalia and they visited the above mentioned localities again. During these journeys the collected material was initially distributed in collections of succulent plants in the USA with the designation B&L, which is short for the names of the succulent collectors Jerry Barad and Seymour Linden. The trip of 1986 is extensively described in a highly recommended article in The Euphorbia Journal (Linden 1994).

Two different forms with a B&L-number are growing in my glasshouse for several years now. The first to present

Fig.7: The cyathia of Euphorbia *species nova B&L 887 attracts one's attention by the shorter peduncles and the bigger and brighter glands.*

Fig. 8: The young fruit is already clearly visible while the flowering of the male flowers is not over yet.

to you is *Euphorbia horwoodii* B&L689. (This form of Euphorbia horwoodii B&L689 has been in my collection for a long time and passed on to many other collectors with the misspelled number B&L589.) Further information received from John Trager of Huntington Botanical Gardens revealed that the B&L-numbers are corresponding with the Lavranos & Carter et al. collection numbers when added 24 before the B&L-number. So B&L689 is the same collection as Lavranos & Carter et al. 24689, which is actually a recollection at the typelocality. Instead of what was initially thought *Euphorbia horwoodii* B&L689 represents the true *Euphorbia horwoodii*.

This original form has thinner and less sturdy branches than the previous form and the colour pattern on the branches is of a more dull lighter green, yellow-green and grey-green and is not made of vertical bands but of irregular spots. Most easy to recognize are the downward or sideways curved spines. This form grows the fastest, but is also the most reluctant to flower of these three forms in cultivation. Also a branch without a growing point of *Euphorbia horwoodii* B&L689 is the easiest one to form offsets out of a flowering eye. These offsets initially have the spherical appearance of a seedling and also have the juvenile characteristic feature of having four equally sized spines per spine shield.

The second plant with a B&L-number to be discussed here is *Euphorbia* species *affinis horwoodii* B&L 887. Although I received it as *Euphorbia horwoodii* it is not this species. Just like the first form dealt with here B&L 887 has quite sturdy, however somewhat thinner branches, which have the habit of growing quite vertically when grafted in the growing conditions in my glasshouse. Quite striking is the grey colour of the branches and when grown in sunny conditions they only have a haze of green. The pattern of different shades of grey is much less pronounced and is less appealing as well. They also have the habit of turning purple under stressed conditions. The spination is much weaker with small straight spines. Of the three plants discussed here, B&L 887 is the easiest one to flower in cultivation and its flowers attract the most attention by the bigger cyathia and brighter yellow glands.

When found out the relationship with the Lavranos & Carter et al. collection-numbers this thought proved to be true, as the corresponding collectionnumber Lavranos & Carter et al. 24887 appears to be mentioned in the species-description of *Euphorbia umbonata* S.Carter, however not as the typecollection. The locality given for Lavranos & Carter et al. 24887 is 78 kilometres southeast of Gardo, some 200 kilometres distant from the typelocality of *Euphorbia horwoodii*.

Most species closely related to *Euphorbia horwoodii* are found only in a small area in nature or even known only from one single locality. *Euphorbia horwoodii* on the other

Fig. 9: One year old seedlings of Euphorbia horwoodii *in the collection of Jaap Keijzer. Note: There are more seedlings visible than you might first assume.*

Fig. 10: One of the seedlings in Fig. 8 is grafted some months ago. The sphere is not as round as in plants in nature. Also notice the star-shaped spines.

Fig. 11: One year after grafting the lateral branches start to grow of this marvellously marked jewel.

Fig. 12: This three year old plant is in full growth and measuring 7 centimetres in diameter.

hand is known from a very wide area, which also might be an explanation for the differences found. I think the answers to this can only be found in the field.

Fig. 13: A seedling of presumably Euphorbia horwoodii *which has 'forgotten' its spherical juvenile phase.*

Two faces

Euphorbia horwoodii sometimes is called the *Euphorbia* with the two faces, a subglobose plant and a shrublet (Jenkins 1998). The seed of *Euphorbia horwoodii* is rather small for a *Euphorbia*, as is the seedling after germination. The seed shell remains on top of the sticky seedling. Grains of sand and dust cling onto the tiny seedling, which obviously protects it against the harsh climate in which it has to grow and also makes it almost impossible for predators to find it. This survival strategy is found also in other related species in this group of plants.

How well adapted they might be in their natural environment, but how difficult these seedlings are raised in our hothouses in Western Europe! Their great need of light and warmth, slow growth rate and their extreme vulnerability to any excess moisture are the cause of this. Even if we are realistic, it is a true challenge to raise these plants from seed, and we accept the self-imposed burden and pretend it can be done. Some success can be achieved however and very small spherical seedlings, only a few millimetres in diameter, can be successfully grafted on to a well growing stock. Several times we have observed that a seedling does not grow into a sphere but right away starts growing as a spiny branch (see Fig. 13). Sadly I must admit that the few times we could harvest ripe seeds of *Euphorbia horwoodii*, we did not keep the different forms separate. For this reason we can only speculate on which forms have two faces or not.

Offsetting of plants in cultivation

Above is already mentioned the two ways of making offsets of *Euphorbia horwoodii* B&L 689. There are some similarities to be seen between these seedling-like offsets and the shoots made to form a main stem of the euphorbias in the Section *Triacanthium*, which I described before in this journal (van Veldhuisen 2006). The best way one can see that these offsets revert to the juvenile phase is that the spine shields with four equally sized spines form a cross. Also the spine shields easily come off. So far I was unsuccessful in rooting such a little ball, but grafting is an easy trick. The result is a much more handsome specimen than when a single branch is grafted. The branching of a seedling-like graft is at a lower level just above the stock and so the graft starts growing more broadly. I have to add that both the other plants discussed here also have the habit of producing seedling-like offsets, but not as easily as B&L 689.

Additional note on *Euphorbia umbonata*

When your writer found out in course of finishing this writing that *Euphorbia* species *affinis horwoodii* B&L887 represents *Euphorbia umbonata*, he was immediately

confronted with another problem. Plants originally received as *Euphorbia* species nova Lavranos & Carter et al. 23370, southwest of Eil, also mentioned as another collection than type under the description of *Euphorbia umbonata*, proved to be very different from Lavranos & Carter et al. 24887.

A drawing of *Euphorbia umbonata* Bally & Melville 15663 collected just northwest of Iskusshuban seems to represent a less branched and longer spined plant. In this respect also *Euphorbia perarmata* S.Carter is sometimes mentioned, but also seems to posses longer spines, which point towards the tip of the branches.

This all is very confusing, but my initial conclusion is that both Lavranos & Carter et al 24887 (B&L887) and Lavranos & Carter 23370 are not *Euphorbia umbonata*. Pictures of cultivated plants are added to this article, so you can form your own opinion.

To conclude this article I would propose that for the interested grower of euphorbias it is worthwhile growing all these different forms in your collection. The differences are easy to see and recognizable at a distance. They are examples of the most beautiful and special plants of the genus *Euphorbia*. The fact that even with such a widely cultivated *Euphorbia* there is still so much to discover is for me very special.

Fig.14: A grafted plant of Euphorbia *species nova Lavranos & Carter et al. 23370, widely grown in cultivation as* Euphorbia umbonata

Fig. 15: Holotype of Euphorbia umbonata *kept at the herbarium at Kew Garden (Foto:Volker Buddensiek)*

Fig. 16: Holotype of Euphorbia perarmata *kept at the herbarium at Kew Garden (Foto:Volker Buddensiek)*

Fig. 17: A grafted seedling of Euphorbia horwoodii *without any spination at all which resembles the closely related* Euphorbia gymnocalycioides *a lot (perhaps a hybrid).*

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