Remarks on *Euphorbia hadramautica* Baker

by Wolfgang Ewest

Fig. 1: Euphorbia hadramautica, *fruiting at the end of the rainy season*

Euphorbia hadramautica Baker occurs in Ethiopia, Oman, Somalia and Yemen (including Socotra Island). Reports of occurrence in Kenya have yet to be confirmed (World Checklist of Vascular Plants, 2022). *Euphorbia napoides* Pax and *Euphorbia oblongicaulis* Baker are synonyms according to the World Checklists.

E. hadramautica is a succulent subshrub and grows primarily in the desert or dry shrublands. Here I report on my observations of the species in the Dhofar Province in southern Oman where *E. hadramautica* grows in the flat plains east and west of Salalah at sea level on calcareous soil. The region receives a few weeks of rain in summer during the monsoon season (kharef). The plains in front of the break-off edge remain much drier than the mountain slopes behind it, which are up to about 1000 m high and completely overgrown with green then. During the rest of the year, the entire area is completely dry everywhere. At the end of the dry season, the plants sometimes look "pitiful" (Fig. 2). However, they recover well after the rain and then start to grow. Specimens are probably not damaged by the livestock kept in this area (dromedaries, cattle), at least I could not discover any signs of feeding.

My wife and I have been to the Dhofar region four times so far: twice in the dry season (April 2004 and 2013), at the end of the monsoon (September 2010) and after the monsoon (October 2022). My impressions of the conditions of the *E. hadramautica* populations were very different. The first impression was that *E. hadramautica* is not very long-lived in its natural habitat. The plants probably only survive a few (3-5?) years. They are certainly older than 1 year, as "growth rings" (Fig. 33) can be seen on many plants.

Fig. 2: Dormant specimen at the end of the dry season

Fig. 3: E. hadramautica *with growth rings*

Fig. 4: E. hadramautica *growing in high density*

Fig. 5: E. hadramautica *specimens easily spotted on bare ground*

Fig. 6: Low clouds at the end of the growing season; note the coastal plain is almost devoid of plants.

Fig. 7: E. hadramautica *flowering*

Fig. 8: E. hadramautica *in full growth*

Fig. 9: Leaves begin to wilt at the end of the monsoon season.

Fig. 10: Three weeks after the monsoon plants return to dormancy.

Fig. 11: Only few specimens could be found in October 2022

Fig. 12: Grasses dominating the vegetation in October 2022 compared to 2010 (Fig. 6)

In 2004 and 2013 we were able to find many plants in some places both east and west of Salalah. It was not difficult to spot them, as the terrain was completely dry and free of other plants or plant remains. (Fig. 4, 5). In 2022, on the other hand, no specimens at all were to be found at the site east of Salalah, although it had rained and other herbaceous plants were definitely present.

In 2010, at the end of the rainy season (Fig. 6), when there were only clouds on the mountain slopes without rainfall, we could also find many specimens of *E. hadramautica* east and west of Salalah. Some still had well-formed leaves (Fig. 7, 8). In others, the leaves were already drying and the plants bore seed pods (Fig. 1, 9). Obviously, the plants had responded quickly to the rainfall and completed their growth cycle rapidly.

In 2022, three weeks had already passed since the monsoon rains and the plants had meanwhile returned to dormancy (Fig. 10, 11). At the site west of Salalah, however, we could find only a few plants even after a longer search. None of the many specimens we had found in 2004 and 2013 were still present. Moreover, the vegetation now looked completely different (Fig. 12). It had obviously rained well and the area was dominated by grasses. Whether this change in vegetation represents competition for *E. hadramautica* is not known to me.

My current conclusion from the observations is that populations of *E. hadramautica* have to renew regularly from seed due to their relatively short life span. Although the seeds of euphorbias are generally considered to be short-lived, there is a possibility that the seeds of *E. hadramautica* also last a few years.

References

Baker, J. G. (1894): Botany of the Hadramaut Expedition. Kew Bull. Misc. Inform. 1894: 341

World Checklist of Vascular Plants (2022): Euphorbia hadramautica, Published on the Internet at https://powo.science.kew.org/ (retrieved January, 6th, 2023)

Author's contact:
Wolfgang Ewest
e.orbiculifolia@gmail.com