

The main reason we decided to describe the new species as *Pachypodium enigmaticum* is its unusual flower structure. Comparing to other shrubby *Pachypodium* species the flower is much bigger and it has a different shape (Fig. 9). The widest flower reached 62 mm in diameter. Petals are broadly rounded, alternating, bright yellow. The corolla tube is extremely thin (usually 3 mm) and long (up to 35 mm). Five stamens bear anthers at the bottom side and they cover the pistil with sticky stigmas. Pollen is accessible by pollinators only through narrow spaces between stamens. Its flowering time is also different from other *Pachypodium*. *P. enigmaticum* flowers in nature in June–July while *P. densiflorum*, and *P. brevicaule* flower from October till December.

The *P. enigmaticum* locality resembles those of *P. brevicaule* and, especially, young plants look similar both in stem shape and glabrous leaves (Fig. 10). The visible stems of both species are in fact fused branches which constitute the main body, and the real stem is hidden underneath. They both flower yellow, but *P. brevicaule* has smaller flowers (to 30 mm), a broader corolla tube with sexual organs are placed at the bottom, unlike the exerted stamens from the tube in *P. enigmaticum*.

When comparing other flowers of *Pachypodium* species we did not find any common features which would suggest close relationship to the new *P. enigmaticum*. It is very interesting that there are

populations of *P. densiflorum* with typical orange flowers within 10 km from *P. enigmaticum*. In nature we did not find any hybrids which is most possibly caused by different flowering time, habitats and flower structure and therefore by different pollinators. The area of *P. enigmaticum* is also interesting as there are other endemic species within 50–100 km such as *P. rosulatum* ssp. *bicolor* (Lavranos & Rapanarivo) Lüthy and *P. rosulatum* ssp. *makayense* (Lavranos) Lüthy. Recently described *P. rosulatum* ssp. *bemarabense* Lüthy & Lavranos and *P. eburneum* Lavranos & Rapanarivo do not grow much further and it is very possible that this area with difficult access may hide other surprises.

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LITERATURE CITED:

- Lüthy, M. J. (2004). Another look at the pachypodiums of Madagascar. *Bradleya* 22: 85–140.
Rapanarivo, S.H. J.V. et al (1999). *Pachypodium* (*Apocynaceae*). Taxonomy, Habitats and Cultivation. A A. Balkema Press, Rotterdam.



10. *Pachypodium enigmaticum* on quartzitic rock in its typical grassland surroundings. Photo Petr Pavelka.