Additions to the herpetofauna of the Wadi Wurayah National Park, Fujairah

by Balázs Farkas, Balázs Buzás & Valér Farkas

Situated in the Emirate of Fujairah, Wadi Wurayah lies within a priority WWF Global 200 Ecoregion (Ecoregion 127, Arabian Highlands and Shrublands). On account of its rich diversity of rare and endangered mountainous and freshwater habitats and species it was granted protection on March 15th, 2009, following the issuance of Law No. 2 of 2009 by His Highness Hamad bin Mohammad Al Sharqi, the Ruler of Fujairah. The safeguarded area covers a total of 219 km², comprising a core zone of 118 km², a buffer zone of 92 km², and an ecotourism zone of 9 km² and reaches an elevation of 1080 m a.s.l. In January 2013, Fujairah Municipality and Emirates Wildlife Society-World Wide Fund for Nature signed a three-year agreement to transform the newly created preserve into a national park of outstanding importance, the Wadi Wurayah National Park (WWNP; Toureng et al. 2009, Judas 2016). Due to



Figure 1. Photographic voucher specimen of *Asaccus caudivolvulus* from the Wadi Wurayah National Park (photo by Valér Farkas).

these developments the WWNP received considerable attention from conservationists. Toureng et al. (2009) recorded nine reptile species—Pseudotrapelus sinaitus (all UAE populations are now allocated to P. jensvindumi, see Tamar et al. 2016), Pristurus celerrimus, Pristurus rupestris, Ptyodactylus hasselquistii, Bunopus spatalurus (ssp. hajarensis), Omanosaura cyanura, Omanosaura jayakari, Platyceps rhodorachis, and Echis omanensisfrom the WWNP but failed to confirm the occurrences of three species—Hemidactylus sp. (later identified as H. flaviventris), Psammophis schokari, and Echis carinatus (ssp. sochureki)-previously documented from the area (WWF United Arab Emirates Project Office 2006). Since then, following the discoveries of Asaccus gallagheri (Pierson 2014), Mesalina adramitana, Chalcides ocellatus (ssp. ocellatus), and Trachylepis tessellata (Judas 2016), the total number of reptile species raised to 15, with nine being endemic to the Hajar Mountains. We here wish to report the presence of yet another lizard and a snake species as well as to correct the taxonomic assignment of fan-footed geckos inhabiting the WWNP.

Asaccus caudivolvulus Arnold & Gardner, 1984 Musandam leaf-toed gecko, وزغة ورقية الأصابع من الامارات

One specimen photographed on November 6th, 2017 at 19:16 hrs, 25°23.845' N, 56°16.184' E, at \pm 195 m altitude (Figure 1) and another on December 12th, 2017 at 18:46 hrs on boulders in the vicinity of the celebrated freshwater pools, 25°23.847' N, 56°16.186' E, at \pm 190 m a.s.l. Unfortunately, our permit did not allow the actual capture of individuals and we were thus not able to take measurements and count scales of either lizard. However, *A. caudivolvulus* is easily distinguished from *A. gallagheri*



Figure 2. An Asaccus gallagheri encountered close to the entrance gate of the WWNP in 2016 (photo by Balázs Buzás).

(Figure 2) by having enlarged tubercles on the back extending to the upper arms, clearly visible in our photo as small white dots (Gardner 2013). In comparison, both microendemic species—A. gardneri and A. margaritae recently split off from A. caudivolvulus chiefly on the basis of molecular data have smooth brachia (Carranza et al. 2016). Even though it may be locally abundant within its restricted coastal range, urban development seriously threatens the continued existence of A. caudivolvulus (Carranza et al. 2016). Gardner (2013) recorded it from "the rocky wadis draining west into the Gulf, around Khasab; Harf, Khawr Niad, Jiddat Sahasa, Rawdah, Wadi Bih, Wadi Khabb Shamsi, Tayyibah, Wadi Uyaynah, Khabb, Wadi al Qulaydi, and in the isolated rocky headland of Jebel Ras south of Khawr Fakkan." Meanwhile, the Wadi al Helo (Sharjah) population has been shown to represent a distinct species, A. margaritae, whereas the Musandam Peninsula as a whole is believed to be occupied by A. gardneri (Carranza et al. 2016). Asaccus caudivolvulus occurs in sympatry with a fan-footed gecko of dubious identity within the limits of the WWNP (see below).

Ptyodactylus orlovi Nazarov, Melnikov & Melnikova, 2013 Orlov's fan-footed gecko, وزغة اورلف مروحية الاقدام

One specimen photographed on November 6th, 2017 at 19:45 hrs and a second one on December 12th, 2017 at 18:07 hrs on rock slabs, 25°24' N, 56°16' E, at ± 180 m a.s.l., at a few metres' distance from the spots where our Asaccus caudivolvulus were located. Whilst we were regrettably not permitted to manipulate and thoroughly examine them, our images reveal these lizards to have had non-contrasting head patterns, which challenges their identification as *P. hasselquistii* (Figures 3-4). Alas, the low resolution of our digital pictures makes a detailed comparison with the two species consistent with this feature-P. orlovi and P. ruusaljibalicus-impossible. However, while P. ruusaljibalicus seems to be resticted to the Dibba region of Fujairah (Simó-Riudalbas et al. 2017), P. orlovi is known from numerous locations in the Hajar Mountains between the Masafi/Dibba Depression (UAE) and Al Ashkarah (Oman) so we tentatively reassign the WWNP fan-footed geckos to the latter taxon.

Telescopus dhara dhara (Forsskål, 1775) Arabian cat snake, حية القطط العربية

One specimen photographed in rocky terrain close to the entrance gate of the WWNP on December 12^{th} , 2017 at 19:42 hrs, 25°23.335' N, 56°18.659' E, at ± 80 m a.s.l. (Figure 5). According to Gardner (2013), this unmistakable opisthoglyphous colubrid snake has a large distribution range stretching along "the peripheral mountains of Arabia, from the Gulf of Aqaba, southwards through the Hijaz to the Yemen mountains [and] the mountainous and rocky areas of Oman," with scattered records from "northern central Arabia including the Riyadh area." Within UAE



Figure 3. *Ptyodactylus orlovi* photographed on a rock in the WWNP, within a few metres from the spot where the *A. caudivolvulus* were observed. Note the loss of a fingertip and the tail in response to attempted predation (photo by Valér Farkas).

territory, the species has been found at Ain al Ghamour and Al Aqah (both in Fujairah), as well as in Wadi al Helo and Kalba (both in Sharjah; Gardner *et al.* 2009, Gardner 2013). Unfortunately, we were not allowed to handle and examine this individual in greater detail either but its general appearance matched that of a Jiddat as Sahasa (Musandam Governorate, Oman) conspecific figured by Gardner *et al.* (2009).

Acknowledgements

We are most grateful to H. H. Sheikh Mohammed bin Hamad bin Mohammed Al Sharqi, the Crown Prince of Fujairah for sponsoring our researches. Field work was permitted by the Environment and Protected Areas Authority, Government of Fujairah. Ali Hassan Al Hamoudi, Director of the WWNP is thanked for his warm hospitality and Jacky Judas, Manager and Scientific Advisor for Terrestrial Biodiversity, Emirates Wildlife Society–World Wide Fund for Nature, for valuable information.



Figure 4. The second individual of Ptyodactylus orlovi clinging to an overhanging rock surface (photo by Balázs Buzás).



Figure 5. Photographic voucher specimen of Telescopus d. dhara from the WWNP (photo by Balázs Buzás).

References

Carranza, S., Simó-Riudalbas, M., Jayasinghe, S., Wilms, T. & J. Els 2016. Microendemicity in the northern Hajar Mountains of Oman and the United Arab Emirates with the description of two new species of geckos of the genus *Asaccus* (Squamata: Phyllodactylidae). **PeerJ 4**: e2371.

Gardner, A.S. 2013. The amphibians and reptiles of Oman and the UAE. Frankfurt Contributions to Natural History 58. Edition Chimaira, Frankfurt a. M., 480 pp.

Gardner, A.S., Tovey, N. & J. Els 2009. The Arabian cat snake (*Telescopus dhara* (Forskål, 1775)): a new species record for the United Arab Emirates, with notes on the species in Oman. **Tribulus 18:** 24–27.

Judas, J. 2016. Wadi Wurayah National Park, Scientific research report 2013–2015. Emirates Wildlife Society– WWF Head Office, Abu Dhabi, 138 pp.

Nazarov, R., Melnikov, D. & E. Melnikova 2013. Three new species of *Ptyodactylus* (Reptilia; Squamata; Phyllodactylidae) from the Middle East. **Russ. J. Herpetol. 20(2):** 147–162.

Pierson, T. 2014. Two new distribution records of *Asaccus gallagheri* (Arnold, 1977) (Squamata: Gekkonidae) in the Fujairah Emirate, UAE and the Musandam Governorate, Oman. **Check List 10(1):** 168–169.

Simó-Riudalbas, M., Metallinou, M., de Pous, P., Els, J., Jayasinghe, S., Péntek-Zakar, E., Wilms, T., Al-Saadi, S. & S. Carranza 2017. Cryptic diversity in *Ptyodactylus* (Reptilia: Gekkonidae) from the northern Hajar Mountains of Oman and the United Arab Emirates uncovered by an integrative taxonomic approach. **PLoS ONE 12(8):** e0180397.

Tamar, K., Scholz, S., Crochet, P.-A., Geniez, P., Meiri, S., Schmitz, A., Wilms, T. & S. Carranza 2017. Evolution

around the Red Sea: Systematics and biogeography of the agamid genus *Pseudotrapelus* (Squamata: Agamidae) from North Africa and Arabia. **Mol. Phylog. Evol. 97:** 55– 68.

Tourenq, C., Khassim, A., Sawaf, M., Shuriqi, M.K., Smart, E., Ziolkowski, M., Brook, M., Selwan, R. & L. Perry 2009. Characterisation of the Wadi Wurayah Catchment Basin, the first mountain protected area in the United Arab Emirates. **Int. J. Ecol. Envir. Sci. 35(4)**: 289–311.

WWF United Arab Emirates Project Office 2006. Establishment of a mountain protected area in Wadi Wurayah, Fujairah Emirate, United Arab Emirates. Report, 135 pp.

Balázs Farkas

Valér Farkas Artibeus Publishing Bercsényi St. 21 2464 Gyúró Hungary **Email:** farkasbalazs@yahoo.com

Balázs Buzás

Al Mayya Sanctuary P.O. Box 666 Fujairah United Arab Emirates **Email:** bbuzas@gmail.com