

## AMPHIBIAN OBSERVATIONS IN YEMEN, MARCH-MAY 1993

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### INTRODUCTION

The amphibian fauna of the Arabian Peninsula consists of nine anuran (frog and toad) species, six of which are endemics. The six endemic species *Bufo arabicus*, *Bufo dhufarensis*, *Bufo hadramautinus*, *Bufo scortecii*, *Bufo tihamicus* and *Euphlyctis ehrenbergii* all occur in Yemen. Of the other three essentially palearctic species, *Bufo viridis*, *Rana ridibunda* and *Hyla savignyi*, only the latter is known to occur in Yemen where it is restricted to the western highlands.

In the Spring of 1993 from 16th March to 10th May, the Ornithological Society of the Middle East (OSME) mounted an expedition to survey some lesser known areas of mostly southern and eastern Yemen. During this period as the expedition herpetologist I was able to make some observations of the amphibians that were encountered.

### SPECIES ACCOUNTS

During the OSME survey five species of amphibian, four of which are endemic to the Arabian Peninsula (indicated below with an asterix), were observed:

#### \**Bufo arabicus* - Arabian Toad

1. 17.3.93, Kawkaban, 43°52'E 15°31'N, 2500m.

Newly hatched *Bufo* tadpoles (approx. 200) still with external gills, were observed in a shallow drying pool. These were assumed to be *B.arabicus* but a positive identification was not made.

2. 22.3.93, Jebel Iraf, 44°15.31'E 13°07.02'N, 1400m.

Four spot-lighted after dark (22.00hrs.) in livestock watering pool, where *Bufo dhufarensis* was also present.

3. 26.3.93, Wadi al-Jahr, 46°23.50'E 13°58.20'N, 600m.

Over 200 calling after dark in flowing water of wadi bed with *Euphlyctis ehrenbergii*.

4. 28.3.93, Yashbum/Wadi Habban, 46°23.50'E 13°58.20'N, 600m.

At least 300 fully grown tadpoles in slow flowing sections of stream. Approx. 25% with hind limbs and some with forelimbs, plus 10 recently metamorphosed toadlets.

5. 9.4.93, al-Mardam, 45°34'E 14°03'N, 2000m.

One male in sandy area with *Lavendula* and *Tamarix* scrub, close to small arable fields.

6. 13.4.93, lush wadi E. of Mahwit, 43°36'E 15°33'N, 750m.

One male in permanent pool amongst emergent *Juncus*. Found in association with *E.ehrenbergii* and *Hyla savignyi*.

7. 15.4.93, Salah al-Din, 44°12'E 14°40'N, approx. 2000m.

Two pairs in amplexus, 30+ others calling from flooded qat *Catha edulis* field in late-morning during heavy rain. Found in association with *H.savignyi*.

#### Status & Distribution:

*B.arabicus* is endemic to the Arabian Peninsula south of 28° north with many populations in the Asir of south-west Saudi Arabia and the Yemen highlands. This species occupies a

wide range of habitats although is generally most common in areas with some annual precipitation and associated flooding providing breeding pools. *B.arabicus* will aestivate, sometimes up to two years or more, in times of drought. The seven expedition records fall more or less within its known range. The locality at Yashbum represents a slight easterly range extension and is possibly the most easterly known site in Yemen for this species.

\* *Bufo dhufarensis* - Dhofar Toad

1. 22.3.93, Jebel Iraf, 44°15.31'E 13°07.02'N, 1400m.

Two spot-lighted after dark (22.00hrs.) in a permanent livestock watering pool (approx. 5m x 5m, 0.6m deep) on a steep hillside in association with *B.arabicus*. No aquatic vegetation was present, numerous large water-scorpions (Fam: Nepidae) were noted. The pool was semi-manmade, part of one side being built-up with rocks and concrete. One female toad was observed rapidly walking up an almost vertical rock face and into a fissure used as a daytime refuge. Surrounding vegetation consisted of low open *Juniperus* and *Acacia* woodland with a herbaceous understorey.

2. 28.3.93, Wadi Hajr, 48°41.33'E 14°41.33'N, 30m.

Twenty plus spot-lighted after dark (19.00hrs.), amongst boulders in water of flowing wadi, in association with *E.ehrenbergii*. Surrounding area of sand dunes with dense stands of introduced *Prosopis juliflora* with *Tamarix nilotica* and *Salvadora persica* scrub.

3. 7.4.93, Wadi Himarah, 46°53'E 14°03'N, 625m.

Thirty males calling after dark (20.00hrs.), from a temporary shallow pool (max. depth 30cm) in a sand hollow filled with floodwater from a recent storm. The calls were audible up to at least 1km from the pool. During daylight hours almost all toads had retreated to daytime refuges, either burrows in the sand or in nearby *Tamarix nilotica*/*Palmetto* scrub. The surrounding terrain consisted of gently undulating bare sand and gravel with occasional cushions of xerophytic vegetation.

4. 3.5.93, Tarim (grounds of Palace Hotel), 49°00'E 16°03'N, 790m.

Four after dark in watered hotel gardens and one inside the hotel itself.

5. 4.5.93, 5km west of Tarim, 48°57'E 16°03'N, 830m.

Fifteen plus calling in mid-morning from pool created by recent wadi flood waters. Most animals were hidden in dense marginal vegetation of *Juncus* and various grasses.

The call was a rapidly repeated guttural croaking 'chur-chur-chur.....'.

6. 4.5.93, 5km east of Sayun, 48°50'E 15°56'N, 830m.

One under date palm *Phoenix dactylifera* log at edge of small onion field with numerous other small, dry arable fields with scattered date palms, in vicinity.

**Status & Distribution:**

*B. dhufarensis* is endemic to the Arabian Peninsula south of 27° N. It has a wide altitudinal range occurring from just above sea level to at least 1900m. It is found in arid environments and aestivates during periods of drought often only emerging for short periods to breed after rain. The six expedition records lie within its known geographical range but most are new localities for this species in Yemen.

\* *Bufo tihamicus* - Tihama Toad

1. 23.3.94, Wadi El Kubt, 44°23.80'E 13°03.47'N, 460m.

One spot-lighted after dark (21.00 hrs.) hopping rapidly across bare, loose sand. It partially buried itself by shuffling backwards and down into the substrate. The surrounding habitat was a plain of gently undulating sand with approx. 20% vegetation cover consisting of patches of *Tamarix nilotica*, *Salvadora persica*, *Lycium shorei* scrub with other interspersed smaller xerophytes including *Tribulus arabicus*, *Heliotropium sp.*, *Euphorbia sp.* and spiny grasses. Occasional *Acacia* and *Zizyphus spina-christi* trees were also present.

### Status & Distribution:

*B.tihamicus* is endemic to south-western Arabia. It is found along the coastal littoral from 20°N, south along the Tihama coastal plain to the southern most tip of the Peninsula and eastwards to the vicinity of Aden. The one expedition record is within the species known geographical range but represents an increase in its altitudinal distribution. The locality at Wadi El Kubt lies at an altitude of 460m. The previous highest known locality was at Sukhnah in northwest Yemen where the holotype was collected at an altitude of 350m.

### *Hyla savignyi* - Savigny's Tree Frog

1. 13/14.4.93, Iush wadi E. of Mahwit, 43°36'E 15°33'N, 750m.

Two calling (> <13.00-14.00hrs.) on 13.4.93 during intermittent rain. One seen on 14.4.93 in well vegetated waterfilled ditch in association with *B.arabicus* and *E.ehrenbergii*. Habitat well vegetated with permanent flowing water and several still pools. Aquatic vegetation including *Potamogeton pusillus* & *P.nodosus* and much emergent *Juncus* and other marginal herbaceous vegetation. Partial shade was provided by trees, particularly in northern end of wadi.

2. 15.4.93, Salal al-Din, 44°12'E 14°40'N, approx. 2000m.

Three plus calling from flooded qat *Catha edulis* field in late morning during heavy rain. They were found in association with *B. arabicus*.

### Status & Distribution:

*H.savignyi* is considered to be a palearctic relict species occurring in the south-west Arabian peninsula from about 22°N, south to 14°N in the Yemen highlands. In Arabia they have a fairly restricted distribution usually found above 1400m in relatively well vegetated areas with permanent or semi-permanent water. The two expedition records are both new localities for this species but in the general vicinity of previously recorded sites. The first locality represents a slight westward extension and the second a southward extension to their range in Yemen. Elsewhere this species is found in Syria, southern Turkey, west and north Iran, southern Armenia and Azerbaijan.

### \**Euphlyctis ehrenbergii* - Ehrenberg's Frog

1. 19.3.93. Taizz Sewage Lagoons, approx. 44°01'E 13°34'N, 1150m.

Two in water filled ditch in *Juncus* dominated rough grazing meadow.

2. 19.3.93, Taizz marsh, approx. 44°01'E 13°34'N, 1150m.

Ten plus in pool under date palms *P.dactylifera*, ten in well (water level approx. 3m below ground surface), one in second nearby well in wet cattle-grazed meadow.

3. 26.3.93, Wadi al-Jahr, 46°23.50'E 13°58.20'N, 600m.

Fifty plus spot-lighted after dark in flowing water in wadi. They were calling intermittently and found in association with *B.arabicus*.

4. 28.3.93, Wadi Hajr (1km N. of road), 48°41.33'E 14°05.66'N, 30m.

Five plus spot-lighted after dark amongst boulders in flowing water of wadi bed.

5. 7.4.93. Wadi Hajr (4km N. of road), 48°42'E 14°07'N, 30m.

Ten plus in slow flowing irrigation ditches around small arable fields.

6. 13.4.93, Iush wadi E. of Mahwit, 43°36'E 15°33'N, 750m.

Five in small pools in association with *B.arabicus* & *H.savignyi*. (For habitat see *H.savignyi* locality 1 above).

7. 22.4.93. Wadi al-Masilah, 51°08'E 15°14'N, 95m.

Three adults in flowing water in wadi.

8. 3.5.93, al-Sawm, 49°18'E 16°08'N, 800m.

Ten in flowing water in wadi.

9. 3.5.93, west of al-Sawm, approx. 49°14'E 16°08'N, 800m.

One observed, two plus calling.

10. 6.5.93, Marib Dam, approx. 45°20'E 15°28'N, approx. 1150m.

Large numbers calling, one recently metamorphosed froglet and one tadpole with hind limbs in marsh habitat behind dam with dense stands of *Phragmites australis*, *Typha sp.* and *Juncus spp.*

**Status & Distribution:**

*E.ehrenbergii* is endemic to the south-western Arabian Peninsula with an introduced population in the vicinity of Riyadh, central Saudi Arabia. They have a wide altitudinal range and are most common around permanent water but are capable of aestivating for periods of about two years in times of drought. The expedition record from close to the mouth of Wadi al-Masilah represents an eastward range extension for this species although it has been recorded before in this wadi system about 150km to the north-west.

**REFERENCES**

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