A Field Guide to the Amphibians and Reptiles of Bako National Park (Second Edition)

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by

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Introduction

**Bako National Park**, gazetted in 1957, is the oldest National Park of Sarawak State. It covers an area of 2,742 hectares of sandstone peninsula, along the north-west coast of Borneo, the landmass jutting out to the South China Sea.

This field guide lists all species of amphibians and reptiles known from Bako National Park and its immediate vicinity. For each species, we provide the current scientific name, a recommended English name, maximum size attained, brief description relevant to identification, including scalation, general body form and colouration, and its conservation status (IUCN Red List, version 2016-1). The cut-off point for the checklist is 7 November 2017. We expect additional species of herpetofauna from the Bako, and would appreciate being informed of such records from the readers.
**BUFONIDAE**

*Ingerophrynus quadriporosus* (Boulenger, 1887)  
Four-ridged Toad  
Size 60 mm

**Identification:** Body stocky; hind limbs short; two pairs of ridges between eyes; parotoid gland longer than wide, followed by rows of warts; tympanum diameter larger than eye; fingers not fully webbed; back rather smooth, more warts on limbs and flanks. Back orange or yellow-brown; belly cream. **IUCN Category:** Least Concern.
Pelophryne signata (Boulenger, 1894)
Short-legged Dwarf Toad  Size 17.6 mm

**Identification:** Body slender; webbing on hand thick, reaching tip of first finger; half of outer fingers free; webbing reach disks of first toe only; disks on fingers expanded; parotoid gland absent; hind limbs short. Back pale to dark brown, small black spots, sometimes with a pale lateral stripe along flanks; belly yellow, spotted with brown or black. **IUCN Category:** Near Threatened.
**DICROGLOSSIDAE**

*Fejervarya cancrivora* (Gravenhorst, 1829)
Mangrove Frog

**Size 80 mm**

**Identification:** Body moderately slender; snout narrow; dorsum with broken longitudinal ridges; flanks of body and limbs with rounded tubercles; outer metatarsal tubercle absent; toes with pointed tips, less than half webbed. Back brown to brownish-grey, with dark markings; belly cream. **IUCN Category:** Least Concern.
**DICROGLOSSIDAE**

*Limnonectes aff. kuhlii* (Tschudi, 1838)

**Kuhl’s Creek Frog**  
**Size 69 mm**

**Identification:** Body robust; head enlarged in adult males, with large, tooth-like processes on mandibles; limbs short; flanks of body and limbs with rounded tubercles; toes webbed to tips; tympanum hidden; back dark or mid-brown with darker blotches; a pale brown band from eye to jaws and one across snout; belly cream, except for the dark-spotted throat and chest. **IUCN Category:** Least Concern.
DICROGLOSSIDAE

*Limnonectes paramacrodon* (Inger, 1966)  
Masked Frog  
Size 75 mm

**Identification:** Body robust; snout rounded; tympanum and supratympanic fold distinct; a few low tubercles on dorsum; toe tips distinctly widened and webbed to tips, except toe IV, with one phalange free; back greyish-brown; dark tympanum and supratympanic fold; belly yellow.  
**IUCN Category:** Near Threatened.
DICROGLOSSIDAE

*Occidozyga laevis* (Günther, 1859)
Yellow-bellied Puddle Frog  Size 48 mm

**Identification:** Body stocky; hind limbs short and thick; toes thick, fully webbed, with rounded tips; a single tooth-like projection on lower jaw; back dark grey brown, sometimes with a pale vertebral stripe; belly lemon yellow. **IUCN Category:** Least Concern.
**MEGOPHYIDAE**

*Leptobrachium ingeri* Hamidy, Matsui, Nishikawa & Belabut, 2012

**Inger’s Litter Frog**

**Size 47 mm**

**Identification:** Body stocky; head wider than body; eyes large; limbs short and weak; toes webbing relatively well developed; toe tips pointed; inner metatarsal tubercle large; skin of dorsum smooth. Back dark brown to grey, usually with a darker pattern on forehead and body; tympanum one-third covered by dark marking; flanks with scattered dark spots; belly and limbs with dark patches; limbs barred dorsally. **IUCN Category:** Not Evaluated.
**Identification:** Body slender; head narrow; snout pointed; skin with large granular structures; outermost fingers and toes short; toes basally webbed; back greyish-brown, sometimes with darker markings; flanks yellow to cream-coloured; throat pale pink with paired dark longitudinal stripes; chest and belly cream-coloured. **IUCN Category:** Vulnerable.
Identification: Body stout; snout pointed; outer fingers and toes small; toes barely webbed; dorsal surface of females pebbly, that of males with tiny spines; back tan to dark brown, usually with darker blotches, flanks brownish-orange; a dark eye-like spot in inguinal region; throat and chest brown; belly grey. IUCN Category: Not Evaluated.
**Identification**: Body stocky; skin smooth; head narrow; snout pointed; tympanum absent; only three fingers present; toe tips widened; hind limbs elongate. Back brownish-pink to grey; dark brown patch on the middle of the back; black blotches below eye and nares; black dots along flanks; belly mottled with brown. **IUCN Category**: Least Concern.
**RANIDAE**

*Chalcorana raniceps* (Peters, 1871)
Copper-cheeked Frog  
Size 60 mm

**Identification**: Body slender in males, relatively robust in adult females; head pointed; toes nearly completely webbed; finger and toe tips with disks; tympanum large. Back green, changeable to brown; a distinct white lip; belly cream; ventral surface of thighs reddish-pink. **IUCN Category**: Least Concern.
Identification: Body slender; head relatively large; eye prominent; tympanum visible; toes less than half webbed; fingers long; upper lip with pale spots; Back dark brown, with darker spots on the sides, granular to slightly warty in texture; tympanum black, with a distinct pale centre; belly cream or pale brown; iris golden with red-copper tint anterior and posterior to pupil. IUCN Category: Least Concern.
**Pulchrana signata** (Günther, 1872)
Striped Stream Frog  
**Size** 68 mm

**Identification:** Body slender; tympanum visible; tips of digits slightly swollen; toes over half webbed; back and sides dark brown to nearly black, with yellow or orange spots, a red to orange stripe is starting from the snout and continues to the end of the body without interruption, separating on both sides the dorsum from the flanks; belly grey. **IUCN Category:** Least Concern.
**Rhacophoridae**

*Philautus tectus* Dring, 1987

Arched Bush Frog  
Size 27 mm

**Identification**: Body slender; head narrow; lores deeply concave; canthus prominent; hind limbs long; nuptial pads large; tips of fingers and toes expanded into disks; toes half webbed; back weakly tuberculate; dorsal tan or yellow, changing under stress to mottled grey and brown; a light-edged dark bar between the eyes; belly greyish-cream.  

**IUCN Category**: Vulnerable.
RHACOPHORIDAE

*Polypedates colletti* (Boulenger, 1890)
Collett’s Tree Frog

**Size 78 mm**

**Identification:** Body slender; head triangular; snout acutely pointed; tympanum distinct; most toes extensively webbed; back and belly coarsely granular; a conical appendage on heel; back tan to reddish-brown or brownish-grey; a dark hour-glass shaped pattern; flanks with scattered dark spots; limbs with dark bars. **IUCN Category:** Least Concern.
**Identification:** Body slender in males, robust in females; snout profile rounded; fingers free of web; no fringe of skin along arm; no tubercle on heel; skin smooth; back variable, ranging from yellow, olive to brownish-yellow, with or without dark lines on back; belly cream. **IUCN Category:** Least Concern.
**Identification:** Body relatively slender in males, robust in females; snout rounded; tips of fingers and toes disk-like; fingers and toes fully webbed; fleshy flap at heel; back and forehead reddish-orange, pink or reddish-brown, with darker markings; webbing orange to red; iris tan; belly yellow, with red areas. **IUCN Category:** Least Concern.
**Identification:** Head large with a heavy snout; a pair of ridges running from orbit to the centre of snout; scales on back more oval than in most other crocodiles; anterior nuchal scales usually absent; juveniles brightly coloured, being black spotted or blotched on a pale yellow or grey background; adults greyish-olive, the bands showing less contrast. **IUCN Category:** Low Risk/Least Concern.
GEOEMYDIDAE

*Cyclemys enigmatica*  Fritz, Guicking, Auer, Sommer, Wink & Hundsdörfer, 2008
Bornean Leaf Turtle  

**Identification:** Carapace oval, depressed, three keeled; enlarged scales on forehead; plastron with a hinge in adults; carapace dark brown, with a reddish tinge; forehead copper to brown, lighter than temporal region; neck dark, lacking stripes; plastron dark brown to black, sometimes with dark radiating lines. **IUCN Category:** Not Evaluated.
**GEOEMYDIDAE**

*Heosemys spinosa* (Gray, 1831)
Spiny Hill Turtle  
Size 220 mm

**Identification:** Carapace oval; vertebral keel distinct; marginals of adults smooth; marginals of juveniles expanded, with distinct spines; plastron with weak hinge in females; fingers and toes partially webbed; hind limbs club-shaped; carapace brown, small, yellowish-orange or red spot behind eye; plastron brown, scutes with radiating lines.  
**IUCN Category:** Endangered.