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FEJERVARYA LIMNOCHARIS (Indian Cricket Frog). **MORPHOLOGY.** In agriculture fields, amphibian populations are affected by chemical contaminants and managerial practices. Earlier reports have shown that exposure to these contaminants can result in expression of behavioral and morphological abnormalities and contribute to the decline of amphibian populations in agro ecosystems (Daniels 2003. Curr. Sci. 85:1415–1422). Similar incidences have been reported from various habitats of central Western Ghats (Gurushankara et al. 2007. Appl. Herpetol. 4:39–45). Ouellet (2000. *In* Sparling [ed.], Ecotoxicology of Amphibians and Reptiles, pp. 617–661) reported that abnormalities of amphibians in tropical habitats ranged between 0 and 2%. In the following report, we present information on abnormalities of adult *Fejervarya limnocharis* recorded in paddy fields of central Western Ghats. In these fields, regular application of pesticides (organochlorine and organophosphate, range 300–700 mL ha^{-1} per crop) and synthetic manures (nitrophosphate and potash, range 200–300 kg ha^{-1} per crop) is being practiced.

Fejervarya limnocharis is a common inhabitant of all agro ecosystems in central Western Ghats, where it breeds in the shallow water of paddy fields. A survey of *F. limnocharis* was made at ten different plots, each 2.5 ha, in paddy fields located (13.53°–1373°N and 75.63°–75.66°E), near the Bhadra River Dam in Karnataka State of India. Surveys were conducted during January–March 2007 after harvest. During these surveys 259 adult frogs (mean SVL 21.39 mm, SD 4.951 mm) were collected and visually examined for abnormalities following the field keys of Meteyer (2000. Biological Science Report USGS/BRD/BSR-2000-0005). Of the 259 individuals examined, 28 (10.8%) were abnormal. Abnormalities recorded were tumors with disfigured hind limb bones (39.29%), short-toe/ brachydactyly (35.71%), missing digit/Ectrodactyly (21%), and incomplete limb/Ectromelia (3.6%).

Becon et al. (2000. Appl. Herpetol. 3:39–65) observed 5% abnormality of frogs living in contaminated agro ecosystems of Asia, some parts of Europe, and America. Compared to these observations, the occurrence of 10.8% abnormality in our area is very high. Given that pesticides and chemical manures are added to every crop, the likelihood that contaminants cause abnormalities in *F. limnocharis* is high.

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HYLARANA RANICEPS (White-lipped Frog). **PREDATION.** We relate herein an observation of the predation of a *Hylarana raniceps* metamorph by a spider. *H. raniceps* is a common species in the lowlands of Bornean dipterocarp forests. In March 2007, we observed a "fishing spider" of the species *Thalassius* cf. *albocinctus* (Doleschall, 1859) at a alluvial pond off Headhunters' Trail, near Camp 5 (04.139056°N, 114.899944°E), Gunung Mulu National Park, Sarawak, East Malaysia (Borneo), with a metamorph of *H. raniceps* as prey. The spider was sitting on a vertical trunk in the pond, about 20 cm above the pond surface and was grasping the right thigh of the metamorph (Fig. 1). The spider was disturbed by photography and ran down the trunk with the prey, entered into the water and actively dove to the bottom at about 1 m below surface. Shortly afterwards, it surfaced again and released the dead metamorph. *Thalassius albocinctus* is well known for fishing small sized fishes from the surface layer of standing or slow running waters.

FIG. 1. *Hylarana raniceps* metamorph captured by a "fishing spider" (Pisauridae: *Thalassius* cf. *albocinctus*), Gunung Mulu National Park, Malaysia.

At Gunung Mulu National Park, we frequently saw *T.* cf. *albocinctus* hunting on the surface of ponds with an abundance of breeding frogs and therefore we assume it to be a common amphibian predator. Toledo (2005 Herpetol. Rev. 36:395–400) reported that risk of invertebrate predation on amphibians is proportionately high during the breeding season and in recently metamorphosed frogs, compared to other life history stages, and we speculate that predation by fishing spiders might have an important impact on larval and metamorph survival.

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Universiti Malaysia Sarawak, 94300, Kota Samarahan, Sarawak, Malaysia.

HYLA CHRYSOCELIS (Cope's Gray Treefrog). **OCULAR PATHOLOGY**. Ophthalmological disorders have been recorded in most vertebrates. Often, the animals in which these lesions have been described have been in captivity for varying lengths of time. However, it is unusual for such lesions to be discovered in wild populations. This disparity in discovery (not necessarily *incidence*) is probably because the condition may predispose the subject to predation or make it unable to compete successfully for resources. Captive animals are subject to observation and, thus, increased detection of ocular abnormalities. Intraocular inflammation, including panophthalmitis and uveitis have been reported in amphibians and reptiles (Zwart 1985. *In* R. Ippen et al. [eds.], Sinnesorgane: Erkrankungen der augen; Haut und anhangs-organe, pp. 250–269. Akadamie Verlag, Berlin (DDR); Millichamp and Jacobson 1986. *In* R. N. Kirk [ed.], Current Veterinary Therapy IX. Small Animal Practice, Ophthalmic Diseases of Reptiles, pp. 621–623, W. B. Saunders Company, Philadelphia, Pennsylvania; Frye 1991. *In* F. L. Frye [ed.], Husbandry, Medicine and Surgery in Captive Reptiles, Ophthalmic Conditions, 2nd Edition, Vol. 2, pp. 326–244. Krieger Publ. Co., Malabar, Florida; Lawton 1993. *In* S. M. Peterson-Jones and S. M. Crispin [eds.], Manual of Small Animal Ophthalmology, Ophthalmology of Exotic Species, British Small Animal Veterinary Association, Cheltenham, United Kingdom; Frye and Williams 1995. Self-Assessment Colour Review of Reptiles and Amphibians. Manson Publ., Ltd., London, United Kingdom, 192 pp.). The alteration of the crystalline lens, in the form of subcapsular lenticular disorganization, is well known in human ophthalmology (Hogan and Zimmerman 1962. Ophthalmic Pathology, 2nd Edition. W.B. Saunders Company, Philadelphia, Pennsylvania, pp. 344–468) but less often encountered (or recognized) in herpetological medicine.

An adult male *Hyla chrysoscelis* (50 mm SVL) was collected alive on 16 September 2000 by CTM in the South Texarkana/Liberty-Eylau area of Bowie County, Texas, USA (33.3716°N, 94.0733°W, elev. 92.1 m). The left eye was grossly enlarged and discolored. After obtaining essential measurements, the frog was photographed (Fig. 1), and euthanized by immersion in a satu-

FIG. 1. Pre-euthanasia photograph of *Hyla chrysoscelis* with panopthalmitis; note the massively swollen and enlarged left eye.

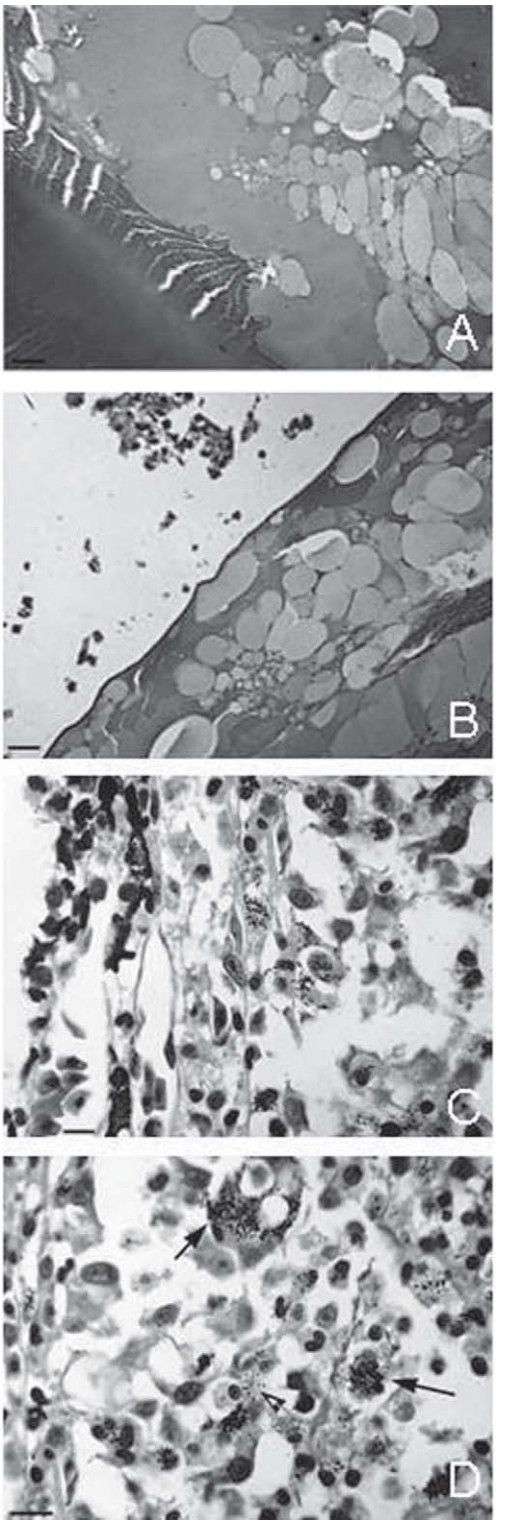

FIG. 2. A. Low power photomicrograph of the crystalline lens and intraocular fibrinous exudate adhering to a portion of the lens capsule. H & E. Bar = 20 µm. B. Photomicrograph of the affected lens. Note the degeneration and disruption of the normally lamellated concentric ring pattern and the pale-staining altered foamy areas. H & E. Bar = 20 µm. C. Photomicrograph of the intraocular exudate. Brown & Brenn. Bar = 30 µm. D. Another view of intraocular exudate; note large macrophages with engulfed bacteria and melanin pigment (solid black arrows) and individual bacteria (open black and white arrow). Brown & Brenn. Bar = 30 µm.