



### Indian bullfrog

(*Hoplobatrachus tigerinus*)

IUCN Red List: Least Concern; CITES: Appendix II; IWPA, 1972: Schedule IV

A Greenish, olive or brown large sized frog (134mm) found in upper, middle and lower stretches of the Ganga River. A mid-dorsal yellowish line present on the back. Found in freshwater wetlands, especially in paddy fields and ponds. Feeds on invertebrates, small mammals and birds. Breeding takes place during the monsoon season. Illegal collection for food, loss of wetland habitats and water pollution by pesticides and other agrochemicals, road mortality are major threats.



### Jerdon's bullfrog

(*Hoplobatrachus crassus*)

IUCN Red List: Least Concern; CITES: Not listed; IWPA, 1972: Schedule IV

A large sized frog (121 mm) with dorsally brown and darker spots found in upper, middle and lower stretches of the Ganga River. Irregular glandular folds present on back. Found in seasonally flooded grasslands, open plains, cultivated areas and around human settlements. Breeds in various types of waterbodies, mainly prefer large river. Habitat loss and collection for food are major threats.



### Dudhwa tree frog

(*Chiromantis dudhwaensis*)

IUCN Red List: Data Deficient; CITES: Not listed; IWPA, 1972: Not listed

It is a small sized tree frog with brownish yellow colour. This species is currently known only from the type locality of India, where it was observed and collected below 100m asl, although it is expected to occur more widely. Found in Dudhwa National Park in Uttar Pradesh. A semi-arboreal species that is mostly associated with scrub forest, grassland and rural areas. The species may be vulnerable to habitat loss and climatic shifts however research is underway to identify its threats.

All the information and photographs are provided by Dr. Abhijit Das

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 भारतीय वन्यजीव संस्थान  
Wildlife Institute of India

amphibians  
of  
ganga  
river





Amphibians are considered as most vulnerable to climate change. Their population decline due to habitat loss, overutilization and fungal diseases is driving them towards extinction.

Amphibians like frogs are unique semi-aquatic vertebrates. Their life cycle is primarily dependent upon freshwater resources. Mostly, the eggs are laid in water or moist conditions, the larvae grow in water bodies and metamorphose into adult. They have semi permeable skin which is used for cutaneous gas exchange. This characteristic feature, along with dependence upon freshwater ecosystems make frogs acutely sensitive and susceptible to even minor changes in temperature, humidity, and air or water quality and fungal disease.

Amphibians play a pivotal role in both aquatic and terrestrial ecosystem as secondary consumers in many food chains. Adult amphibians also act as one of the best biological pest controllers. From the ecological

perspective, amphibians are regarded as good ecological indicators. Their responses have been used to indicate habitat fragmentation, ecosystem stress, impact of pesticides etc.

The Ganga River nurtures about 90 species of amphibians in its basin. These species are distributed from 3,000 m asl to the plains and delta. Most of these less studied species need conservation interventions because of habitat fragmentations, habitat loss, climate change, pollution, use of pesticides and herbicides in agricultural fields and other human interferences.

National Mission for Clean Ganga-Wildlife Institute of India project titled “Biodiversity Conservation and Ganga Rejuvenation” is a science-based species restoration programme. Conservation of these amphibian species is a part of this science-based Ganga rejuvenation programme.

Species that are depicted here are representatives of lotic and lentic systems intricately associated with the Ganga River system. Long term monitoring of these freshwater dependent animals can help us develop better early warning system for ecosystem change.

The conservation status of the species are referred here as per the International Union for Conservation of Nature and Natural Resources (IUCN) Red List, Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) Appendices and Indian Wild Life (Protection) Act (IWPA), 1972 Schedules.



### Himalayan paa frog

(*Nanorana vicina*)

IUCN Red List: Least Concern; CITES: Not listed; IWPA, 1972: Not listed

It is a middle sized frog (58mm) found in upper stretch of the Ganga River at elevations of 2,000-3,000m asl.

Body colour is olive or brown. It is associated with high-altitude streams, springs, fountains and other running water within open forest and grassland habitats. The threats to this species are poorly known, but destruction of stream habitat might threaten the species.



### Annandale's paa frog

(*Nanorana annandalii*)

IUCN Red List: Near Threatened; CITES: Not listed; IWPA, 1972: Not listed

It is a medium sized frog (55mm) found in upper stretch of the Ganga River between 1,500 and 3,000 m asl. Body is olive coloured with marblings. Belly white in colour. Found in rocky streams and brooks in montane forests, and with pools in forest clearings. Stream modification, rock collection and dams are major threats.

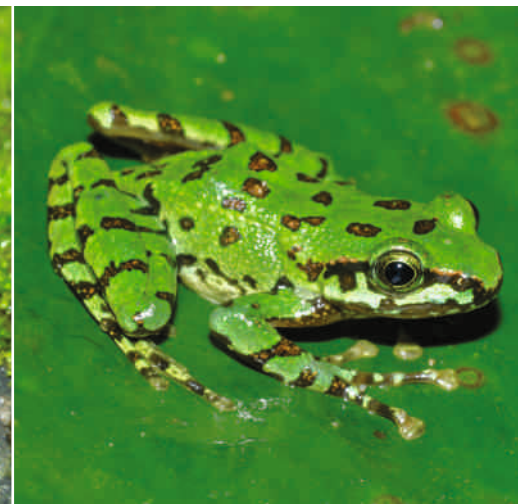


### Nepal Paa frog

(*Nanorana minica*)

IUCN Red List: Vulnerable; CITES: Not listed; IWPA, 1972: Not listed

It is relatively small bodied frog (28-41mm) found in upper and middle stretch of the Ganga River ranging from 1000 to over 2400 m asl. Body brownish with black spots and small warts present on the back. Its distribution is highly fragmented and confined to montane subtropical forests and streams. The species is restricted to Western and Eastern Nepal, Himachal Pradesh and Uttar Pradesh. Habitat loss through dam construction, pollution are major threats.



### Cascade frog

(*Amolops formosus*)

IUCN Red List: Least Concern; CITES: Not listed; IWPA, 1972: Not listed

A green frog size (75mm) with dark brown or black spots, found in upper stretch of the Ganga River, at an altitudinal range of 1,000 and 2,500m asl. It is associated with streams and riparian vegetation. Breeds along fast flowing streams. They are obligate stream dwelling species. Their tadpoles have ventral suckers to attach them on rocks of fast flowing streams. Loss of habitat due to deforestation and changes in river hydrology through dams are the major threats.



### Marbled toad

(*Duttaphrynus stomaticus*)

IUCN Red List: Least Concern; CITES: Not listed; IWPA, 1972: Not listed

Light brown moderately large bodied toad (76 mm) found in upper and middle stretches of the Ganga River, body is with numerous warts or marbling. Large parotid gland present behind the eye. Found in open plains, grasslands, scrubland, forest, agricultural land and human habitations. Breeds in permanent and seasonal pools, seasonal streams and slow-flowing streams. Loss of habitat, use of pesticides and herbicides in agriculture, water pollution are the major threats.



### Tytler's pond frog

(*Hylarana tytleri*)

IUCN Red List: Least Concern; CITES: Not listed; IWPA, 1972: Not listed

A lowland species found up to 300m asl in middle stretch of the Ganga River. Mainly found in pools, lakes and marshes. The species generally breeds in stagnant waterbodies. The main threats to this species are water pollution with agrochemicals.