

## Field Studies of Non-Marine Turtles

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The Testudines, comprising turtles and tortoises, include some of the most ancient of the living terrestrial vertebrates, having evolved about 250 million years ago. Globally, 341 species are reported and about 45% of them are threatened, mostly due to anthropogenic reasons. India ranks 6<sup>th</sup> in respect to turtle species richness, with 33 described species (four tortoises, 24 freshwater turtles and five marine turtles). This high diversity is largely due to the country's size as well as strategic location at the cross roads of Ethiopian, Palaearctic and Oriental realms and a diversity of habitats. Distribution of turtles across the country is fairly well known, thanks to the nationwide surveys conducted by Government of India-US Fish & Wildlife Service-Wildlife Institute of India project during 1991–1993. However, as of date, barring marine turtles, ecological studies on Indian turtles are scanty. This is largely due to problems associated with species identification, their largely aquatic mode of life and lack of standard sampling protocols for tropical conditions. A brief account of identification of turtles, survey, collection and marking techniques is given below.

### SPECIES IDENTIFICATION

The Testudines are variously known as 'turtle', 'terrapin' and 'tortoise'; turtles-highly aquatic (such as marine turtles), terrapins- semi-aquatic (freshwater turtles) and tortoises - terrestrial (land) forms. The body of the turtle is encased in a box-like shell, the upper one is known as carapace and the lower one, plastron. Most of the freshwater turtles have webbing between digits, but in marine turtles, it is modified as a paddle. Tortoises lack digital webbing and the open body parts have tubercles and small cornified structures. The freshwater

