

## Turtles in Shwesettaw Wildlife Sanctuary, Myanmar

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Shwesettaw Wildlife Sanctuary, a 546 km<sup>2</sup> wildlife and forestry reserve (20°04'N; 94°36'E) lies in the southwestern part of the Myanmar central dry zone (Fig. 1). This area has a strong seasonal shift from heavy monsoon rains (May to November; annual rainfall average, 70 cm) to a total absence of rainfall (December to April). Lying to the east of the Rakhine Yoma range, the landscape consists of low rolling hills, often gouged by steep banked streams, most of which are dry by mid February but are deep torrents soon after the monsoon rains begin. A dry tropical deciduous forest covers much of the Sanctuary with an indaing forest occupying the southeastern quarter. Both forest types have an open canopy, and a grass ground cover is widespread.

The Mone River forms the northern border of the Sanctuary and the Man River the southern border. Both streams flow eastward and empty into the Ayeyarwady River. The Sanctuary is cut by numerous jungle tracks and roads, including a major north-south highway (gravel). These roads, a major Buddhist pagoda complex, and numerous villages adjacent to the Sanctuary boundaries make poaching of plant and animal materials difficult to control, thus all components of the biota experience human predation.

Shwesettaw likely contains the largest remaining population of Burmese star tortoises (*Geochelone platynota*). Other Shwesettaw turtles are: *Indotestudo elongata*, *Cyclemys "dentata"*, *Melanochelys trijuga*, and *Lissemys scutata* (Lay Lay Khaing, pers. comm.). The Myanmar Nature and Wildlife Conservation Division's (NWCD) effort to preserve these turtles includes their captive propagation.

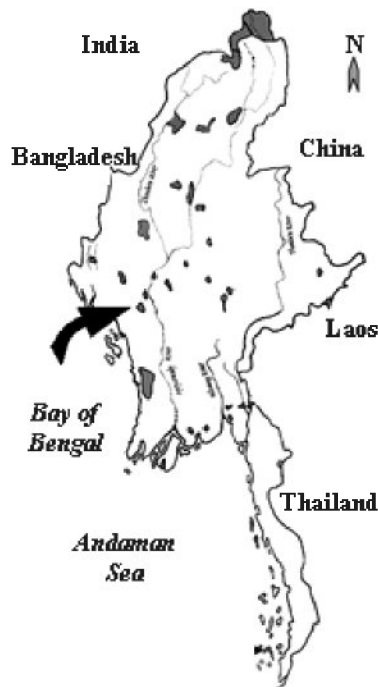


Figure 1. A map of the protected areas of Myanmar with an arrow pointing to Shwesettaw Wildlife Sanctuary. The figure is modified from Kress et al., 2003. A checklist of the trees, shrubs, herbs and climbers of Myanmar. Contrib. U.S. Natl. Herbarium 45.

The captive Shwesettaw *G. platynota* population consists of 21 individuals, 12 adults (eight females and four males) and nine juveniles (two 2001 hatchlings, seven 2002 hatchlings). Another clutch was incubating in the soil floor of the tortoise compound during our 22-28 February 2003 visit. Additionally, the tortoise compound housed 41 *I. elongata*, a few *M. trijuga* and *C. dentata*, and two *Manouria emys* from the Rakhine Yoma (individuals confiscated from wildlife traders by the NWCD) (Fig. 2). Daw Lay Lay Khaing, the wildlife ranger in charge of the captive propagation program, informed us that all of the turtles, except the star tortoises, would be returned to the wild early in the 2003 monsoon, *M. emys* to the Rakhine Yoma and the others locally in the less accessible areas of the Sanctuary.

Two other NWCD reserves, Lawka Nanda Wildlife Park (21°07'43.3"N; 94°51'31.1"E) and Min Son Taung Wildlife Sanctuary (21°23'57.0"N; 95°47'31.1"E), have captive populations of the star tortoises. Lawka Nanda is a small zoo (44 ha) with no natural woodland remaining. They have about 75 star tortoises; all apparently derived from the Min Son Taung Wildlife Sanctuary. Min Son Taung (22.6 km<sup>2</sup>) has both a wild population in the sanctuary's deciduous dry forest and a captive one (10 individuals). We have no information at this time on the reproductive success of either of these two captive propagation programs, although the presence of a 7.3 cm CL specimen at Min Son Taung suggests one successful incubation.

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Figure 2. A tortoise stack beneath the largest shelter inside the tortoise compound.