ABSTRACT

Macrobrachium lanchesteri is presumed to be one of the most common and widely distributed freshwater prawns inhabiting still or slow-moving waters in Myanmar. The reproductive biology of M. lanchesteri from the Zaw Gyi River and Taung Ta Man Lake in central Myanmar was studied based on the occurrence of ovigerous females and eggs in different developmental stages. The total numbers of specimens studied were 1307 from Zaw Gyi River and 757 from Taung Ta Man Lake. Ovigerous females were captured throughout the year. A higher percentage of ovigerous females was obtained from June to November. Carapace length of ovigerous females ranged from 6.3 to 12.5 mm and egg size (length) varied from 0.8 to 1.0 mm. Compared to other species, the eggs of M. lanchesteri are larger than those of M. olfersii (0.4-0.6 mm) and smaller than of M. lamarrei (1.1-1.5 mm). More than half of the eggs were still at an early stage of development for every month sampled. The incubation interval of the eggs was estimated to be less than one month, because of the presence or absence of eggs in the eyed stage during the period from February to March.
INTRODUCTION

In Myanmar, freshwater shrimp and prawns are important components of the inland fisheries and an economically important food for local consumption. *Macrobrachium lanchesteri* (De Man, 1911) is presumed to be one of the most common and widely distributed freshwater prawns inhabiting still or slow-moving waters in Myanmar. *Macrobrachium lanchesteri* was originally described from southern Thailand (Lanchester, 1901; De Man, 1911) and has been reported from central Thailand (Suvatti, 1937), Peninsular Malaysia (Johnson, 1961, 1968; Chong & Khoo, 1988), Singapore (Chong & Khoo, 1988; Ng, 1990), Sabah (Ng, 1994), and Baroda and Nagpur in northern India (Tiwari, 1949). In Malaysia and Singapore, this species is very important both economically and as live food for aquarium and cultivated fish, as well as in scientific research pertaining to the biochemistry and physiology of prawn reproduction (Chong & Khoo, 1988). In Myanmar, *M. lanchesteri* is also a very important species for local people depending on the freshwater fish and prawn for food. *M. lanchesteri* was found the whole year round and rather abundant at the Zaw Gyi River and Taung Ta Man Lake. However, there is only scarce information on the ecology and reproductive biology of this species. This kind of information, however, is needed to conserve the species’ stock. This study, therefore, examined the reproductive biology of *M. lanchesteri* from the Zaw Gyi River and Taung Ta Man Lake in central Myanmar, based on the occurrence of ovigerous females and their eggs, at different developmental stages. Furthermore, we estimated the size at sexual maturity and brood size.

MATERIALS AND METHODS

Monthly samples were collected at two sites: Taung Ta Man Lake (Site 1) and Zaw Gyi River (Site 2), Mandalay Division, central Myanmar (fig. 1) from June 2002 to March 2003. Site 1 was located in the northern area of Taung Ta Man Lake and was about 45 km from Site 2. Taung Ta Man Lake is located near the bank of the Ayeyawady River, and becomes flooded during the rainy season (June-September) while a low water level is observed during the dry season (February-May). The Zaw Gyi River is about 48 m wide, and its slow flowing waters merge into those of the Myitnge River. The junction of the two rivers is located near the southern end of Taung Ta Man Lake.

All specimens were collected at both sites using a cast-net and a push-net, during day time. The cast-net had a 10 mm mesh size, and the push-net, locally called “Yin Ton” (2960 mm long; 3000 mm wide at the mouth; 1500 mm at the cod end), had three regions of different mesh size (12 mm anteriorly; 10 mm in the middle;