BIRDS OF MIDA CREEK

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INTRODUCTION

Mida Creek, one of the most important sites for shorebirds in the Kenya coast, supports a high density of Palearctic migrant waders. Thus, their distribution and abundance has been studied so far between May and October, 1996. In addition , the interrelationship of the birds and macro- and meio- benthos is being studied. In this study we try to identify the macrobenthic and meiobenthic organisms that are available as food for the birds. The largest tidal flat in Mida Creek was selected for this study. It has not been possible to add more stations on other tidal flats (near Sudi and Kirepwe Islands) as intended due to the tight schedule

MATERIALS AND METHODS

Bird survey

The largest tidal flat has been sampled, since the start of the sampling programme in May, 1996, during the lowest spring tide when the area is exposed. Bird counts are conducted to identify the birds feeding on the tidal flat. Boat counts, of birds, have also been conducted all around the creek to identify the high water roosting sites of the birds.

Benthic prey

Macro- and meio- benthic sampling is carried out monthly during the lowest spring tide (this is done simultaneously with the tidal flat bird count). One transect from the mangrove edge to the low water level has been established with five stations along it. Triplicate core samples are collected from each station. A core of diameter 6.4 cm is pushed to a depth of 10 - 15 cm, four times for each sample, and the sediment collected is placed in polythene bags for transport to the laboratory. In the laboratory, the sediments are sieved through a 1mm sieve and animals present sorted out and identified. A quadrat of 1 m^2 is used to estimate the densities of epibenthic fauna.

RESULTS

Waterbird abundance

The seasonality of the birds is determined from the species composition and the arrival time of the Palearctic migrants. A noticable influx of migrants was seen in September. However, a few early arrivals among Curlew Sandpipers and Little Stints were seen in August. An extremely rare wanderer, the Guant kingfisher, was also observed in August but has not been spotted since. The overall bird fauna is dominated by the benthivores as seen in Fig. 1.

Habitat selection

Three intertidal mudflats support the greatest densities of birds. The piscivorous species such as the Kingfishers, Gulls and Terns mainly utilize the subtidal habitats. This explains why on several occasions, kingfishers can be found perched on boats next to the hotels.

During the high tide, most of the birds assemble adjacent to the tidal flats which form their feeding grounds. This explains the preferred assemblages which were described earlier in the first quarter report (Map. 3). Population movements including interregional movements can be observed among the crab plovers and flamingoes. Such movements could be adaptations to variable resource conditions within the creek. For this reason, the variation patterns in macrofauna are being established inorder to understand their interrelationship with the birds.

Macrobenthic prey

Preliminary results show that the main prey items are polychaetes, oligochaetes, crabs, molluscs, sipunculids and small fish. The most abundant group forming majority of the macrobenthic fauna are the polychaetes and the following families have been identified: Nereid, Pectinariidae, Phyllodocidae, Syllidae, Nephtyidae, Orbiniidae and Flabelligeridae.

Figure 2 shows the mean densities of infauna from May to September. It is still early to discern a seasonal pattern from the data already collected. However, there has been a marked decrease in the infuana from June to September. This decrease was accompanied by the disappearance of the polychaete family Pectinariidae.

Figure 3 shows the mean densities of epifauna from May to September. There was an increase in density from June to August and a decrease during September.

In future, it is expected that a clear pattern will be seen for the macrobenthic fauna which will be correlated with the bird population in Mida Creek.

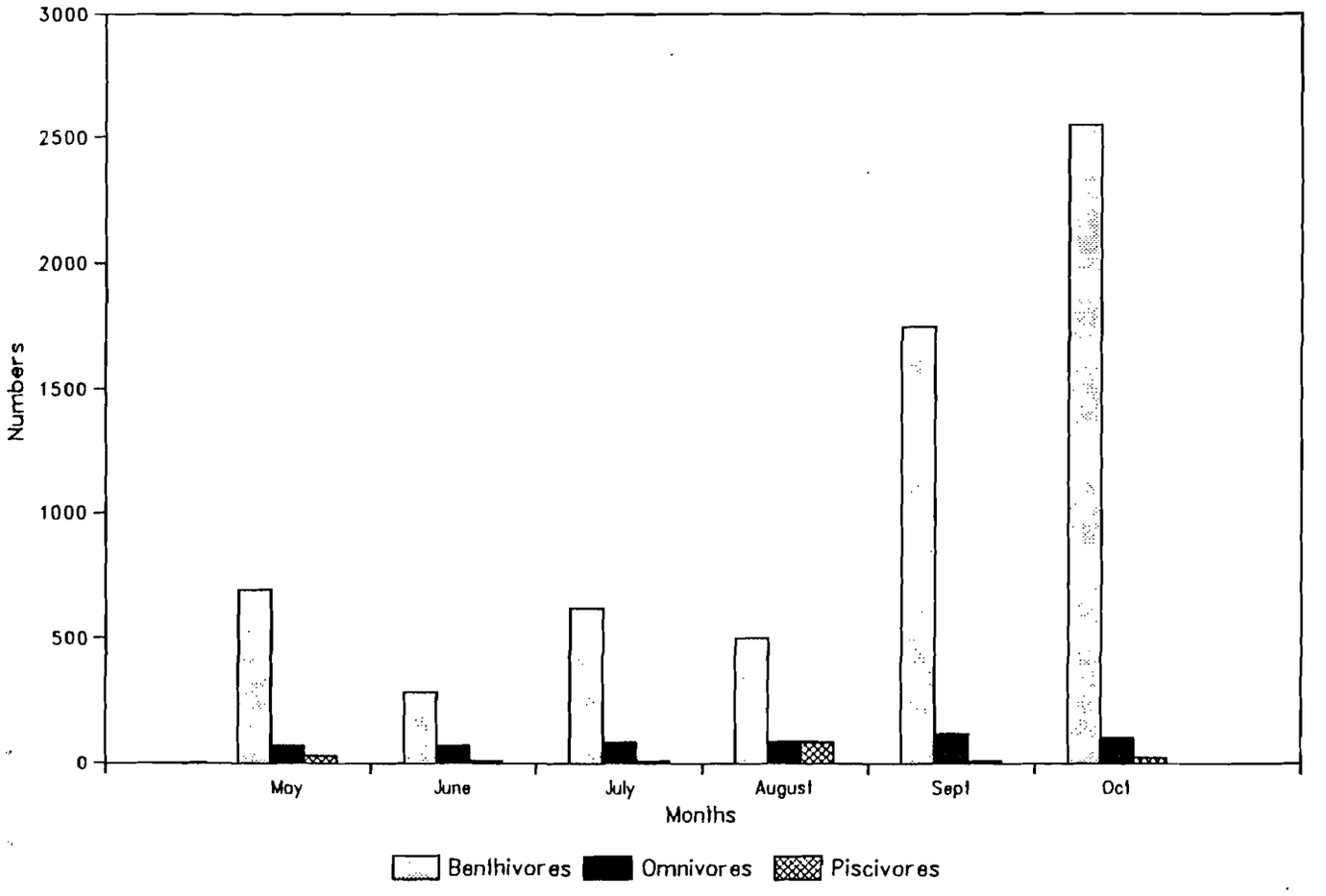
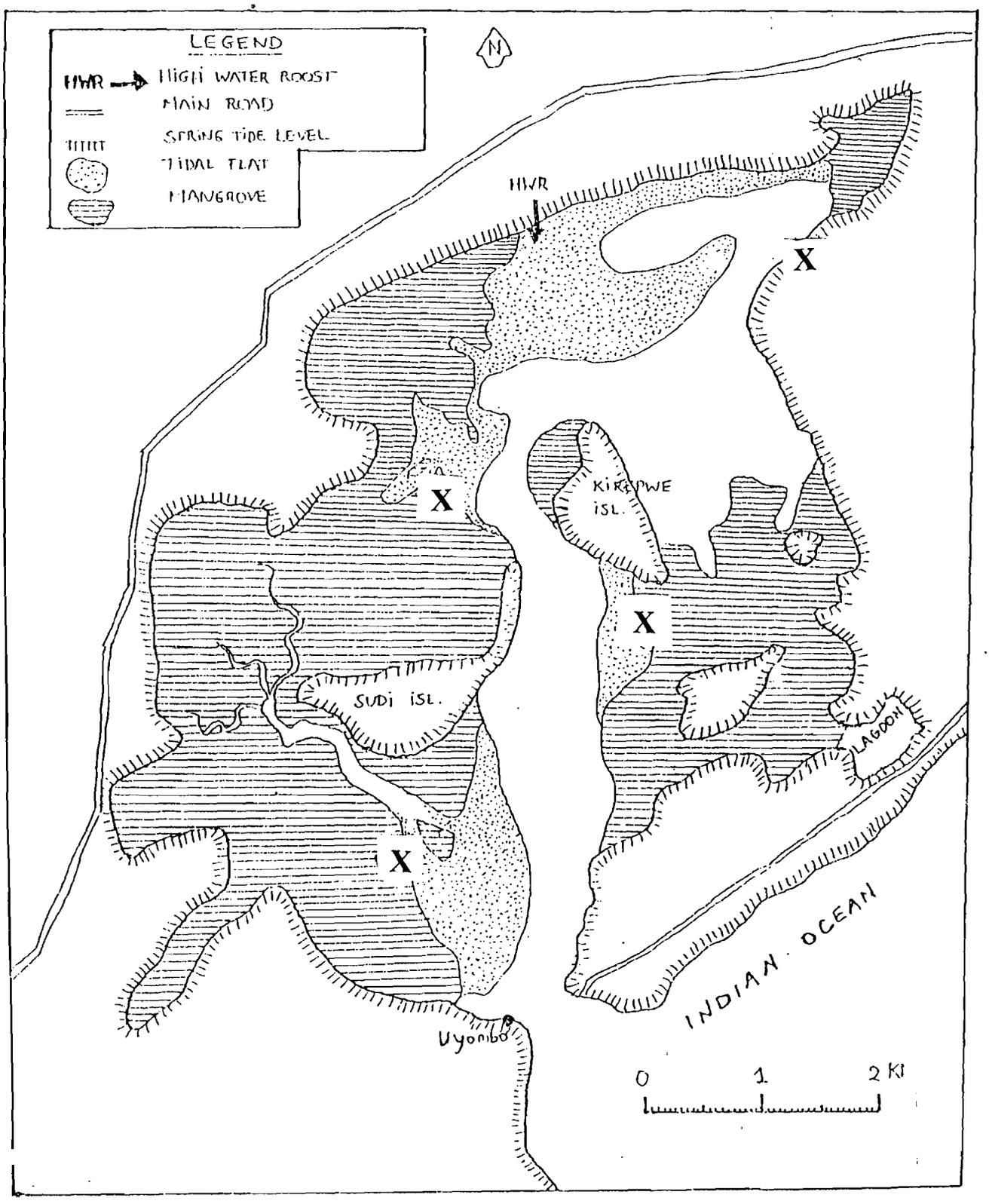


Fig. 1: Abundance of birds in Mida Creek from May - Oct., 1996.



Map 3: Map of Mida Creek showing the location of the bird aggregations

X. Areas where birds aggregate in big groups

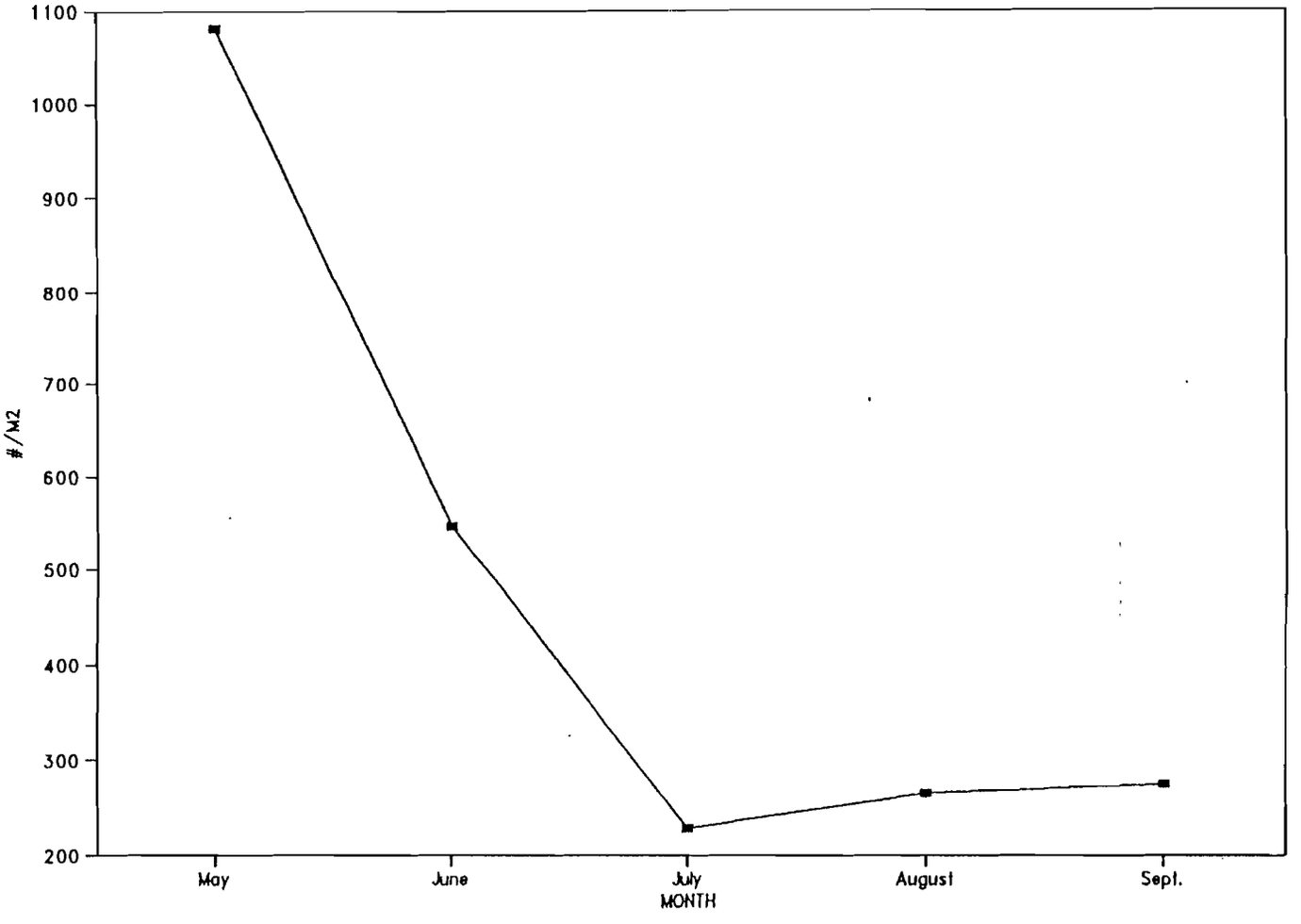


Fig. 2: Infauna density in Mida Creek. (May - Sept., 1996)

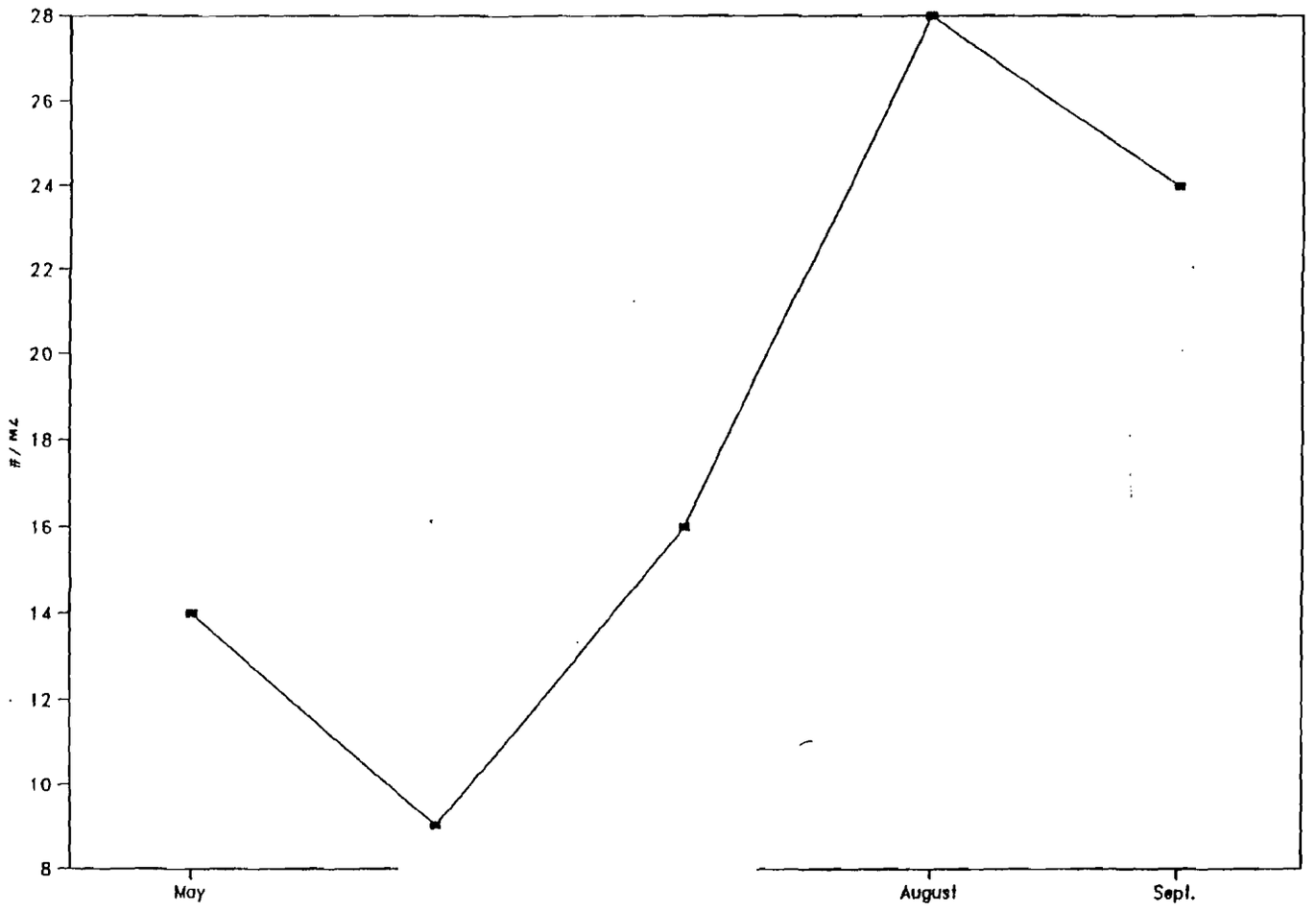


Fig. 3: Epifauna density in ay - Sept., 1996)