

ABSTRACT

THE ECOLOGY OF THE ASIAN ELEPHANT
(ELEPHAS MAXIMUS L.) IN
SRI LANKA

By

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The distribution, structure and habitat relations of elephant populations in areas to be developed for agriculture under the Accelerated Mahaweli Development Program of Sri Lanka were studied between September 1980 and July 1982.

Seasonal changes in high elephant-activity sites along the Mahaweli Ganga river evidently were influenced by changes in available grass. Grasslands of mixed species composition were preferred habitats and grasses were the elephant's most important foods. The Mahaweli Ganga floodplains provided a higher quality diet for elephants than that of other parts of the study area.

A higher number of adult males per adult female was observed in floodplains than in upstream habitats along the Mahaweli Ganga. Female herds seen along the same river seemed to separate into nursing and juvenile-care units during certain times of the year.

Partially flooded villus, protected croplands and the abundance of non-preferred stages of Imperata-grass perhaps led to increased competition between elephants and livestock on upland grazing sites during the wet season. In the dry season, floodwaters in the villus

receded, croplands were abandoned after harvest and preferred stages of Imperata became available following burning. Owing to such increases in available grazing sites, no dry season competition on upland grazing sites, between elephants and livestock, was evident. Possible changes in grass-species composition and ungulate densities that might lead to competition between elephants and ungulates inside national parks were discussed. The extent of browsing by elephants was assessed in this study to be lower than that reported for other study sites in and near national parks.

Economic equivalents of crop losses reported by farmers perhaps reflected their hopes for compensation. Existing and new wildlife reserves in the study area protected only parts of elephant ranges. The maintenance of existing corridors would minimise the chances of elephant populations being isolated in one or more of the reserves. The future of the Asian elephant in Sri Lanka was discussed. Other important management and research recommendations for conserving the elephant populations of the Accelerated Mahaweli Development Area, are given.