Results and Discussion

The results of the investigation are summarized in the Table 1. Since non-significant ($P > 0.05$) sex difference in mortality was found, hence mortality data for both sexes was combined for analysis. The observations evidently indicate that cholecalciferol gives good results against *Mus musculus* (Blyth). It further indicated that the lower concentration 0.025% of cholecalciferol yielded 50% kill in the range of 7-15 days, where as both the higher concentrations (0.075 and 0.05%) resulted in cent per cent mortality in the range of 2.9-5.4 and 3-6.19 days respectively. The consumption of poison bait reveals its good acceptability and palatability. Poisoning symptoms were noticed after 48 hr exposure which involve sluggishness, crawling movement, pulmonary distress and loss in body weight. Field studies have also revealed that cholecalciferol (vit. D_3) gives 94.44% control success, Saxena *et al.* (1988).

It is evident from the above finding that both the higher concentrations, namely 0.075 and 0.05% of cholecalciferol are quite effective against *Mus musculus* (Byth) and its use on large scale will be boon for the farmers.

Acknowledgement

We thank New Chemical Industries, Kandivli, Mumbai for a generous gift of Quintox (Cholecalciferol Tech. Conc. 7.5%). Q. A. is thankful to SAP for financial assistance.

October 27, 1995

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7. ABOUT *DILLENIA AUREA* AND FEEDING BEHAVIOUR OF ELEPHANTS

I studied the Ecology of elephants of Dalma Wildlife Sanctuary for four years between 1989 to 1992. Dalma is situated on the Chhotanagpur Plateau of south Bihar. The essential feature in the physical aspect of the elephants' habitats in south Bihar, is the prevalence of plateaux and hills, often rising into mountains which rarely exceed 1000 m in elevation. The forest of Dalma belongs to a unique *Shorea-Cleistanthus-Croton* series (Gadgil and Meher-Homji 1986). The Champion and Seth (1968) classification shows the forest as consisting of dry peninsular hill sal (*Shorea robusta*), and northern mixed dry deciduous type. The forests of the Chhotanagpur plateau exhibit a variety of habitat types ranging from dry deciduous to evergreen though the study area constituted only dry deciduous type of forest.

Dillenia aurea is also found in the forest along with *Dillenia pentagyna* — the more common associate of sal (*Shorea robusta*) in other places. H.H. Haines in his two classics on the flora of this region, namely Forest Flora of Chhotanagpur (1910) and The Botany of Bihar and Orissa (1925), while describing *Dillenia aurea* writes "Fruit edible and is greedily eaten by wild elephants, which destroy the trees to obtain them." I monitored this species with special

interest and found that elephants fed on the bark of this tree albeit rarely. Surprisingly, they neither touched the fruits nor destroyed the trees. This visual observation was substantiated by local tribals who said they had never seen elephants feeding greedily on the fruits of this species but had seen them feeding on the bark of the species on rare occasions. The macro-component analysis of the dung samples never showed remnants of the fruit of *D. aurea.*

Is there a change in the food selection of elephants over a span of 65 years? H.H. Haines never visited Dalma Sanctuary, but his observations were made in other parts of Bihar and in Orissa. The logical explanation to this behaviour could be that the density of this species must have gone low over the years and as a result it was excluded from the dietary of elephants. Presently, this species is common in the Sanctuary and its fruit is relished by the tribals and I enjoyed it equally!

It would be interesting to know whether elephants feed on the bark and the fruit of this tree in other elephant areas.

Incidentally, H.H. Haines quotes Hamilton's observations about the size of the fruit of this species that the fruit was as big as a large-sized apple. Haines notes that he never saw the fruit as large but much smaller. I found that in Dalma Sanctuary and other forests in South Bihar, the fruit is less than half the size of an Apple, golden-yellow in colour, and very sweet when ripe. Thus, my observations support Haines. In that case, in which areas of its distribution, are the apple-sized fruits of *Dillenia aurea* found?

April 25, 1995

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8. TAXONOMY OF YAK: *BOS (POEPHAGUS) GRUNNIENS*

Yak, a mammal of economic importance, living at high altitude (3500 - 6000 m above msl) in the Himalayas, Kun Lun, Pamirs, Tien Shan and Altai, has been known as (*Bos grunniens* or *Poephagus grunniens*), for nearly two and half centuries. Its adaptation to life in gelid climates has always drawn considerable interest among naturalists and biologists. Remoteness, inaccessibility of the habitat, political restrictions and religious strictures preventing excavations in the hometract (Palaentological study), had, so far, delayed the establishment of its correct nomenclature. Recently, some studies have been conducted to establish its correct nomenclature and to ascertain the domestication process of yak and to establish its ancestry. Incidentally, the ancestry for most of the other domesticated animals has already been established scientifically. In this communication, an effort is made to record observations on the taxonomy of the yak, made by different scientists.

Linnaeus (1758) named yak as *Bos grunniens.* He included the yak in the cattle group (*Bos*), possibly due to its likeness and nearness to cattle and gave the species name *grunniens,* or the grunting ox. Gmelin in 1760, termed yak as '*Vacca grunniens villora, Cauda equina*' because of its grunting sound and horse like tail. Buffon, another naturalist of the 18th century, contemporary to Gmelin, described in 1767 the yak in a similar manner and called it, a cow of '*Tartary*'. Almost a decade later Pallas, called yak as horsetailed buffalo (Bonnemaire 1984). Smith



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