

ON THE OCCURRENCE OF DIFFERENT SPECIES OF RATS IN KERALA

Rats are known to cause considerable loss to crops in the field and to crop produces in store. As no information is available on the different species of rats present in Kerala, a survey was conducted, the results of which are presented in this paper (Table 1).

Tatera indica cuvieri, *Bandicota bengalensis bengalensis*, *Bandicota indica indica*, *Rattus rattus wroughtoni*, *R. r. rufescens*, *Mus musculus*, *M. booduga* and *Golunda ellioti* occurred all over Kerala. *R. norvegicus* populations were recorded from Kuttanad (Alleppey district) and parts of the Idukki, Trichur and Palghat districts and they caused substantial damage to rice plants from the tillering to the booting stage.

Mus cervicolor inhabited paddy field bunds in the Idukki district causing damage to the paddy crop,

Mus platythrix was found all over the State except the Wynad region, in garden lands with gravelly soil.

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സംഗ്രഹം

1978-79ൽ കേരളത്തിന്റെ വിവിധ ഭാഗങ്ങളിൽ നടത്തിയ ഒരു സർവ്വേയിൽ സ. സ്മാനത്തു പതിനാറിനും എലികളുള്ളതായി മനസ്സിലാക്കുവാൻ കഴിഞ്ഞു. *Mus cervicolor* എലികളും നിവാസ സ്ഥാനങ്ങൾ, മാളത്തിന്റെ ഘടന എന്നീ വിവരങ്ങളും ഇവ വരുത്തുന്ന നാശനഷ്ടങ്ങളുടെ സ്വഭാവവും ലേഖനത്തിൽ പ്രതിപാദിക്കുന്നു. റാറ്റസ നോർവീജി കൂസ്, മസ് സെർവീകോളർ, മസ് സാക്സിഷോള, മില്ലാർഡിയ മെൽറാഡ എന്നിവ ഇടപ്രഥമമായിട്ടാണ് റിപ്പോർട്ടു ചെയ്യുന്നത്.

Referencee

Agrawal, V. C. and Ghosal, D. K. 1969 A new field-rat (Mammalia : Rodentia : Muridae) from Kerala, India. *Proc. Zool. Soc. Calcutta*, 22, 41-45.
Srinivasachar, H. R. 1972. General characters and classification of rodents. *All India Summer Institute Rodent Biology*. p. 4

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Table—1
Distribution, habitat and burrowing habits of different species of rats in Kerala

| Sl. no. | Species | Distribution | Habitat | Burrow characteristics | Food materials/nature of damage | Remarks |
|---------|---|-----------------|--|--|---|---------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. | <i>Tatera indica</i> <i>cuvieri</i> Waterhouse | All over Kerala | Teak plantations, rubber estates, coconut gardens and fields cropped with pulses, tapioca, sesamum, paddy and jowar, | Usually simple rarely elongate and complex—one or more emergency escapes- Burrow profile length 5 to 20m—no. of openings three or more. | Tapioca tubers, pulses, paddy, jowar, cotton seed and rubber seed. | |
| 2. | <i>Bandicota bengalensis</i> <i>bengalensis</i> Gray | -do- | Widely prevalent in cropped garden lands, semi-forest areas and paddy fields. | Extensive with winding passages—Openings plugged with heaps of soil—Burrow length 5 to 60m—Hoarding of food materials seen only in burrows located in paddy field bunds. | All types of tubers, paddy, groundnut, coconut—Cuts rubber seedlings at the collar region. | |
| 3. | <i>Bandicota indica</i> <i>indica</i> Bechstein | -do- | Close to foundations of buildings, main and inter bunds of paddy fields, rubber plantations and coconut gardens. | Simple—burrow profile length 5-12m—burrow openings large—runways clear near the main entrance. | Prefers tuber crops, rubber seeds, mature coconuts and garbage. Damages paddy crop nearing harvesting | |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|----|---|--|---|---|--|--|
| 4. | <i>Rattus norvegicus</i> Berkenhout. | Kuttanad in Alleppey district, parts of Idukki, Trichur and Paighat districts | Paddy field bunds and around ponds —Prefers waterlogged areas. | Simple—profile length 2–5m—part of the system some- times submerged in water. | Nibbles on cut ends of paddy plants of the tillering to the booting stages. | New record as a pest of rice crop. |
| 5. | <i>R. rattus wroug- htoni</i> Hinton | All over Kerala | Houses, crowns of coconut palms, cavities of trees. | Non-fossorial | Damages tender coconuts, cocoa pods and cotton seeds. | |
| 6. | <i>ft. r. rufescens</i> Gray | —do— | Inhabited and non-inhabited buildings. | —do— | Prefers garbage and cereal grains. | |
| 7. | <i>Mus musculus</i> Linnaeus | —do— | Buildings and dwelling houses—sometimes live in large undistur- bed heaps of coconut husks. | Not studied | Domestic garbage —all types of edible food materials— damages books, stored grains and clothes. | |
| 8. | <i>Mus booduga</i> <i>booduga</i> Gray | —do— | Paddyfield bunds— garden lands—tapioca, pulses, vegetables and rubber plots. | Simple and small— profile one to two metre long—emergency escapes one to three. | Prefers cereal grains. | |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|-----|---------------------------------------|---|---|---|--|---|
| 9. | <i>Mus cervicolor</i> Hodgson | Idukki district | Paddy field bunds | Similar to <i>M. booduga</i> | Cereal grains | New record in Kerala. |
| 10. | <i>M. platythrix</i> Bennett | All over Kerala except Wynad | Garden lands with gravelly soil. | Simple—burrow openings plugged with pebbles—No. of rats in a burrow one to three. | Prefers grass seeds. | |
| 11. | <i>M. saxicola</i> Elliot | Trichur, parts of Attapady in the Palghat district. | Similar to <i>M. platythrix</i> | As in <i>M. platythrix</i> | Prefers grass seeds | New record in Kerala. |
| 12. | <i>Vandeleuria oleracea</i> Bennet | Cannanore district and parts of Attapady in Palghat district. | Areca nut crowns, grass-lands around cotton plots and jowar fields. | Non-fossorial, lives in nests. | Not fully understood. | |
| 13. | <i>Golunda elliotti</i> Gray | Throughout Kerala | Grass lands and semi-forest areas. | Live in nests made of grass—non-fossorial. | Not fully understood—Damages dry land paddy by cutting the plants at the base. | |
| 14. | <i>Millardia mettada</i> Gray | Wynad | Paddy field bunds | Not fully studied | Feed on paddy grains | New record in Kerala. |
| 15. | <i>Rattus rangineae</i> | Trivandrum district | Waterlogged areas | Not studied | Not known | Recorded in Kerala by Agrawal and Ghosal (1969) |
| 16. | <i>Platacanthomys lassius</i> | Idukki, Kottayam and the Attapady area of the Palghat district. | Cashew plantations | Live in large cavities of tree trunks. | Feed on cashew kernels. | Recorded in Kerala by Ellerman (1961) |