

## UTILIZATION OF RODENTS IN TRADITIONAL MEDICINE IN SOUTH-WESTERN NIGERIA.

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**Target Audience:** Wildlife scientists, researchers in traditional medicine,  
environmentalists.

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### ABSTRACT

From survey evaluation carried out between 1995 and 1998 in Osun State South-Western Nigeria, twenty-nine (85.3%) of the recorded 34 rodent species have been identified with preparation and utilization in traditional medicine. The species of rodents of traditional importance in this study include. *Arvicanthis niloticus* (17.0%), *Cricetomys gambianus emini* (14.9%), *Mus musculus* (7.9%), *Lemniscomys striatus*, *Hybomys trivirgatus* (7.9%) and *Hystrix cristata* (5.1%). The major traditional usefulness of rodents are in the treatment of infertility and acclaimed spiritual protection over witchcrafts, prevention of failure and avoidance of disappointments.

There is need to research into the scientific basis for tradintional medicine and also other species involved. There is also the need for standardised scale and measures, better retrieval techniques, processing, packaging, marketing and administration frameworks in traditional healing methods of treatment.

**Key words:** Traditional uses, rodents, utilisation species, South-Western Nigeria

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### DESCRIPTION OF PROBLEM

The public health and well-being of people is highly dependent upon the diverse genetic properties of the world's plants and animals, (1). It is now real that wildlife conservation is one of the most pressing environmental issues globally today (2)

Animal utilization in Africa and Nigeria in particular have been extensive. The importance of wild animals in traditional medicine cannot be over emphasized but is poorly documented. Here in Nigeria and especially in the south-Western part including, Osun State, wild animals especially rodents are

used largely for medicinal healing purposes and for witchcraft apart from food (animal protein) source and safari (3, 4, 5, 6).

There is the question of per caput protein consumption and population growth leading to decimation of many wildlife species especially rodents. Consequently, many rodents are rare due to habitat loss and indiscriminate persecution. There are no documented information on the available rodent species especially their uses - ethnozoological values in traditional medicine, such that those that can be propagated under ex-situ programme would be used to bridge the gap in the deficit of per caput protein consumption and to manage other uses in medicine.

In order to arrest this unsatisfactory situation particularly in traditional utilization, a survey evaluation was carried out between 1995 and 1998 with the following objective:

To comprehensively document the uses (Ethnozoological values) of rodents in traditional medicine, and therefore the extent of rodent involvement in medicinal purposes, in order to develop management strategies for rodent conservation.

## MATERIALS AND METHODS

The uses (Ethnozoological values) of rodents in traditional medicine were documented through enquiries information collected from 429 farmers, hunters and traditional medicine practitioners on structured questionnaires based on earlier test questionnaire used in the study including survey of market places. Data collected include type of rodent species used, the part(s) extracted, other ingredients, retrieval techniques and method (mode) of preparation, application and purposes of usage. Data collected were subjected to participatory rural appraisal technique for authentication for now.

Appointments were booked with the leaders of village traditional medicine practitioners (including native doctor, Alabiye-native midwife, witch-doctor) and other members including users for input to the study. This was done to ensure the collection of information for the documentation study while maintaining the confidentiality associated with such practices. At the appointed time the authors met with village communities concerned at village squares and other pre-arranged meeting places. During the meetings questions were put to the practitioners on various aspects of traditional medical practices and activities with exchange of notes.

The day's activities were rounded up with a review of the information gathered and confirmed at meetings so that information left out could be collected on the field.

## RESULTS AND DISCUSSION

Twenty-nine (85.3%) of the 34 rodent species have been identified with traditional medicine (including witchcraft) preparation for different purposes in Osun, south-west Nigeria. (Table 1 and 2.). Out of 8,000 ways of traditional

medicine preparation encountered within the course of this study, 429 ways involve rodents. It is however interesting to note that out of the 201 different uses (purposes) from the 8,000 ways, 103 different uses involve rodents. That is 51.2% of the different purposes for which traditional medicine are prepared include at least one rodent or the other in South-west Nigeria.

**Table 1: Rodent Species List**

<b>Family Anomalouridae</b>	
1. <i>Funisciurus pyrropus</i>	Fire-footed squirrel
2. <i>Xerus erythropus</i>	Red-legged ground squirrel
<b>Family cricetidae</b>	
3. <i>Tatera valida</i>	Savanna gerbil
4. <i>Taterillus gracilis</i>	Slender gerbil
5. <i>Cricetomys emini</i>	Emin's giant rat
6. <i>Cricetomys gambianus</i>	Gambian giant rat
7. <i>Mastomys natalensis</i>	Multimammate rat
<b>Family muridae:</b>	
8. <i>Arvicantus niloticus</i>	Nile harsh furred rat
9. <i>Dasymys incommutus</i>	Shaggy rat
10. <i>Lophuromys sikapusi</i>	Rufous (Rusty) bellied rat
11. <i>Mus musculoides</i>	Pigmy mouse
12. <i>Mus setulosus</i>	Setulos mouse
13. <i>Mus minutoides</i>	Pigmy mouse
14. <i>Rattus rattus</i>	Common black grey rat
15. <i>Malacomys edwardsi</i>	Edward's swamp rat
16. <i>Oenomys hypoxanthus</i>	Rufous - nosed rat
17. <i>Lemniscomys striatus</i>	Spotted grass mouse
18. <i>Thamnomys rutilus</i>	Shining thicket rat
19. <i>Hybomys trivirgatus</i>	Three striped mouse
20. <i>Uranomys ruddi</i>	Brush furred mouse
21. <i>Praomys tullbergi</i>	Tuillberg's soft-furred mouse
22. <i>Hylomyscus stella</i>	Stella wood- mouse
23. <i>Uranomys foxi</i>	Fox brush furred rat
24. <i>Stochomys longicaudatus</i>	Target rat
<b>Family nuscaridae:</b>	
25. <i>Graphiurus murinus</i>	Common African Dormouse
26. <i>Graphiurus hueti</i>	Huet's Dormouse
27. <i>Mus musculus</i>	House mouse
<b>Family hystricidae</b>	
28. <i>Hystrix cristata</i>	Crested porcupine
<b>Family Thryomomidae:</b>	
29. <i>Thryonomys swinderianus</i>	Grasscutter (cane rat)

Purpose (usage) of rodents in traditional medicine (Utilization) include:

1. To cure stomach ache.
2. To remove eye dizziness.

3. To remove stomach dizziness.
4. To arrest thieves or protect properties.
5. To cure gonorrhoea.
6. To remove barrenness in woman.
7. For supernatural transportation.
8. Against pneumonia.
9. For clairvoyance.
10. To forcefully eject tenants.
11. To enable womb to retain semen.
12. To identify witches
13. For protection against physical assault.
14. To counteract (neutralise) poison
15. To cure " body eruption".
16. For good sales of markets (wares).
17. Against strange night behaviour ( dreams/night torment).
18. Evil /curse repellent
19. To cure shallow frontal in children.
20. To cure frontal problem in adult
21. For good memory.
22. To call anybody supernaturally.
23. Spiritual invocation.
24. To rape a lady/woman.
25. To control intestinal worms generally.
26. Animal hunting aids or hunters.
27. To prevent mis-carriage.
28. To cure liver problems in women.
29. To remove fibroid tissue in women.
30. To dismiss ( indefinite postponement) of court case.
31. To cure swollen body.
32. To cure or relief rheumatism/obesity.
33. To protrude somebody's anus.
34. For plentiful fruiting of cash crops.
35. For good flow of menses, aids pregnancy.
36. For foetus movement and development.
37. Casting spells on people through padlock.
38. Love portions.
39. To win, seduce, commandeer woman for marriage.
40. For good delivery.
41. To eject (deliver) stale pregnancy.
42. Sacrifice to appease witches.
43. Against poison taken.
44. To safeguard pregnancy (prevent: menstruation).
45. To lower blood pressure (hypertension) in women, aids conception..
46. To cure breast disease (problem).
47. For revelation /interpretation.

48. Against fatal sex disease..
49. To cure leprosy.
50. Against black (impure) blood moving round body.
51. To cure fever malaria.
52. To cure dysentery.
53. To relieve backache.
54. Body tonic.
55. For child to start speaking.
56. Against smallpox.
57. To cure boils.
58. To cure/relieve female genital itching.
59. To relieve constipation.
60. To cure (against) malady.
61. For self respect (protection).
62. To cast spell on someone.
63. Against sexual acts in dreams.
64. To cause somebody to commit crime.
65. To secure jobs.
66. To cause fight between couples etc.
67. To cure or prevent issue of blood (haemorrhage).
68. For general body immunity against diseases.
69. To cure hernia.
70. To relieve swollen hands and feet.
71. To overpower opponent physically.
72. To safeguard pre-weaned baby.
73. To send evil spirit /demon after somebody.
74. To cause false pregnancy.
75. Against evil spells /curse generally.
76. To neutralise snake or scorpion poison.
77. For good luck, success.
78. Against extravagant spending.
79. To aid male potency.
80. Paralysis (leading to death by end of day).
81. For competition, master leadership/fortune.
82. To neutralise or counteract enemy spiritual arrow
83. To control chest worms.
84. To send death arrow to somebody.
85. Recurrent affliction.
86. To promote early conception (pregnancy).
87. To control womb (waist) worms in women.
88. To prevent premature child death.
89. To restore menstruation.
90. To aid menstruation.
91. To check watery menstruation.
92. To become invisible.

93. Against convulsion.
94. Money minting.
95. To aid traditional practitioner for success.
96. Self protection against evil spell-witchcraft effect.
97. To immunise genitals against affliction.
98. To cure whitlow.
99. To deliver male child.
100. To cure or relieve female vaginal swelling.
101. To offer sacrifices of goddesses.
102. To cure or relieve male genital itching problem.
103. To call a woman supernaturally.

**Table 2: Traditional utilization preparations.**

Rodent species	Traditional Utilization (%)
*Rats (23 species)	
<i>Arvicanthis niloticus</i>	20.3
<i>Mus musculus</i>	17.0
<i>Cricetomys emini gambianus</i>	14.9
<i>Hybomys trivirgatus</i>	14.9
<i>Lemniscomys striatus</i>	7.9
<i>Mastomys natalensis</i>	5.1
<i>Hystrix cristata</i>	5.1
<i>Funisciurus pyrropus</i>	4.0
<i>Xerus erythropus</i>	3.5
<i>Thryonomys swinderianus</i>	2.3
<i>Mus minutoides</i>	1.4
<i>Rattus rattus</i>	1.4
<i>Lophuromys sikapusi</i>	1.4
<i>Tatera valida</i>	0.23
<b>TOTAL</b>	<b>99.9</b>

\*All rodent species identified with traditional utilization except *Funisciurus pyrropus*, *Cricetomys emini gambianus*, *Thryonomys swinderianus*, *Xerus erythropus*, *Hystrix cristata* (6)

The part(s) used or retrieved involved either the whole animal dry or wet, head, intestine, tail, hair, hands, legs, heart, tongue, blood, stomach, skin, meat, ectoparasite, stake woods, cut grass, faeces, nests, dead or life specimens or a combination of the above, etc. (Table 3). The other ingredients may include other animals and part(s) like bird, reptiles, amphibian, fish, invertebrates, plant parts, soap, minerals, etc. The mode of preparation include grinding, pounding, soaking, burning and sun drying. The mode of application include mixing with food for eating, drinking, incision, tongue licking, etc. Appropriate invocations are involved in certain cases.



The different types of medicine involving rodents as major ingredients are extensively and comprehensively documented in this present survey, but it is well to emphasize some of the important points relevant here (5).

The effectiveness and guaranteed use of traditional medicine so prepared from wild rodents and their by products is largely dependent on the ability of the native doctor to combine effectively and efficiently (manage positively) the right ingredients and not neglecting the very active part. Also where invocation of some unforeseen beings (demonic spirits) is necessary, the native doctor or user of such a medicine should be able to do this without any difficulty. The witchcraft is of little help to the ordinary person, for it is rather complicated with instructions for stages of treatment and then supportive measures.

**Table 4: Rodent in traditional utilization diversity in South-West Nigeria.**

Species	Infertility	Sickness	Protection	Disappointment (failures)	Witchcrafts	Total
<i>Arvicanthis niloticus</i>	45	-	-	25	4	74
<i>Mus musculus</i>	-	28	11	12	3	54
<i>Cricetomys gambianus emini</i>	-	26	7	25	11	69
<i>Hybomys trivirgatus</i>	-	9	-	4	1	14
<i>Lemniscomys striatus</i>	-	5	-	5	10	20
<i>Mastomys natalensis</i>	2	5	5	8	2	22
<i>Hustrix cristata</i>	-	4	5	12	1	22
<i>Funisciurus phrrhopus</i>	-	4	4	6	2	16
<i>Xerus erythropus</i>	-	-	3	12	-	15
<i>Thryonomys swinderianus</i>	-	1	-	8	1	10
<i>Mus minutoides</i>	-	-	1	5	-	6
<i>Rattus rattus</i>	-	1	-	-	5	6
<i>Lophuromys sikapusi</i>	-	4	2	-	-	6
<i>Tatera valida</i>	-	-	-	1	-	1
<i>Hylomyscus stella</i>	-	2	-	-	-	2
Rats (23 species generally)	3	49	10	23	9	94
<b>TOTAL</b>	<b>50</b> (11.60%)	<b>138</b> (32.0%)	<b>48</b> (11.1%)	<b>146</b> (33.9%)	<b>49</b> (11.4%)	<b>431</b> (100%)

+ : Addition

The public preference and social acceptance of traditional medicine has started to move from the low level of acceptance with determination from practioners to promote their national heritage and with governments recognition, researcher, medical profession and extension workers teaming up with them to develop



commercial intercourse, and consequently preventing and imminent extinction of wild animal including rodent for traditional medicine (utilization).

### CONCLUSIONS AND APPLICATIONS

- 1 Twenty nine (85.3%) of the recorded 34 rodent species were identified with traditional utilization and preparations.
- 2 The species of rodents of traditional importance in this study include *Arvicanthis niloticus* (17.0%), *Cricetomys gambianus emini* (14.9%), *Mus musculus* (14.9%), *Lemniscomys striatus* *Hybomys trivirgatus* (7.9%) and *Hystrix cristata* (5.1%)
- 3 The major traditional uses of rodents are in the treatments of infertility, diseases and ailment, acclaimed spiritual protection over witchcrafts, prevention of failure and avoidance of disappointments.
- 4 The usefulness of any part of an animal gives a guide to what should be looked for in an animal and once this is known, methods of obtaining these parts to reduce the threat to animal population can be modelled out. In which case, the animal does not need to be killed before obtaining the useful parts. The more the number of useful parts of an animal, the more the amount of money generated from the sales of the useful parts of the animal. Medicine is known to have the highest form of animal parts being utilized as compared to other aspects of wild animal utilization.

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