WEEKLY EPIDEMIOLOGICAL REPORT

A publication of the Epidemiology Unit
Ministry of Health & Mass Media

231, de Saram Place, Colombo 01000, Sri Lanka
Tele: + 94 11 2695112, Fax: +94 11 2696583, E mail: epidunit@sltnet.lk
Epidemiologist: +94 11 2681548, E mail: chepid@sltnet.lk
Web: http://www.epid.gov.lk

WER SRI LANKA 2026

Vol. 53 No. 23 **01st – 07th June 2026**

Rodents and One Health; An under-recognized public health threat in Sri Lanka - I

***This is the first article of two in a series on* "Rodents and One Health; An under-recognized public health threat in Sri Lanka"**

Rodents

Rodents are among the most widespread mammals accounting for nearly 43% of all mammalian species. They are unified by a single pair of continuously growing incisors in upper and lower jaws. Rodents are seen in every continent except Antarctica.

Understanding Rodent Behaviour

Rodents possess several biological and behavioural characteristics contributing to their successful adaptation to a wide range of habitats. Although their vision is generally poor, they possess highly developed senses of hearing, smell, touch, and taste, which help them locate food, avoid predators, and move freely within their surroundings.

Rodents are also highly adaptable and reproduce rapidly. Many species reach sexual maturity early and can breed throughout the year with a period of gestation around 20-25 days (polyestrial cycle). When combined with constant availability of sufficient amounts of food and favourable climatic factors rodent populations can increase quickly, creating significant challenges for public health and agriculture.

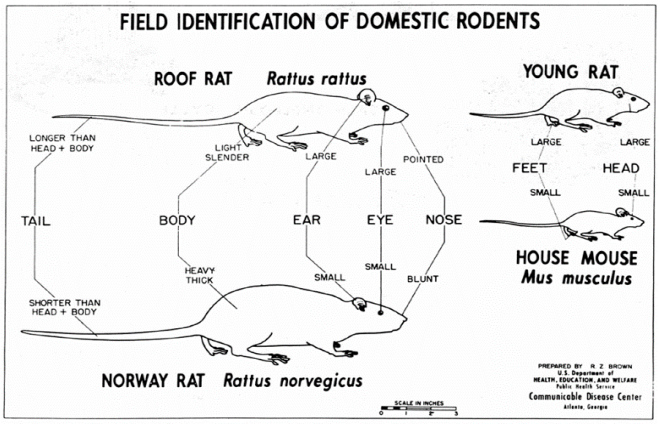
Another important behavioural characteristic of rodents is their tendency to avoid unfamiliar objects and foods, "object shyness." This behaviour can reduce the effectiveness of traps and baits and should be considered when planning rodent surveillance and control activities. Rodentology is a scientific sub discipline focusing on the biology and behaviour of the rodent species.

Public health and economic impact

Nearly 50 diseases affecting humans have been linked to rodents worldwide. These may be transmitted directly through infected rodent urine, faeces, saliva, and bites, or indirectly through contaminated food, water, soil and arthropod vectors such as fleas and mites. In addition, rodent fur can trigger allergic reactions in sensitive individuals. Murophobia, fear of mice and rats is also a known condition.

Table 1. Selected Rodent-Linked Infections

Group	Diseases of Public Health Importance
Bacterial	Leptospirosis, Salmonellosis, Plague, Tularemia, Rat-bite fever
Viral	Hantavirus infections, Lymphocytic choriomeningitis virus (LCMV)
Rickettsial	Murine typhus and rickettsioses
Parasitic	Hymenolepiasis (rat tapeworm), Angiostrongyliasis (rat lungworm)



Source: *Control of Domestic Rats and Mice: Training Guide for Rodent Control* (1973)

1. Rodents and One Health; An under-recognized public health threat in Sri Lanka - I 1
2. Summary of distribution of notified diseases reported by MOH (25th – 31st May 2026) 3
3. Surveillance of vaccine preventable diseases & AFP (25th – 31st May 2026) 4

Other than disease transmission, rodents contaminate food supplies, damage crops, destroy stored grain, and contribute to substantial economic losses. They can also damage buildings, electrical wiring, and water infrastructure, creating additional public health and safety concerns.

It is estimated that rodents cause 5-15% of the total food loss every year, which is equivalent to 33 million tons of food, enough to feed 130 million people. At the same time, it is believed that 1/4 of fires of unknown origin are caused by rodent activity and damage is roughly more than 75 billion dollars in value.

Several characteristics make rodents highly effective reservoirs of disease, such as;

- Adaptability to diverse habitats
- Co-existence in close proximity to human habitats
- Movement between wild, agricultural and urban environment
- High reproductive rates
- Capacity to carry a wide range of pathogens (virus, bacteria, parasites)

Furthermore, urbanization, de-forestation, agricultural expansion and climate change continue to increase the risk of human exposure to rodent populations.

The Beneficial Role of Rodents

Rodents have been used in scientific research and have contributed to advances in microbiology, pharmacology, and vaccine development. Some species are also kept as pets, while some are used as a source of food in certain parts of the world. Rodents play a positive role in ecosystems, as predators in biological control of insect pests and as an important element in food chains.

Rattus norvegicus (Norway rat)

Rattus rattus (Roof rat)

Bandicota indica (Greater bandicoot)

Bandicota bengalensis (Lesser bandicoot)

Figure1: Commonly seen rodent species in Sri Lanka

One health perspective

Rodent-borne diseases highlight the close relationship between human health, animal health, and the environment.

Effective prevention and control require collaboration among public health, veterinary services, agriculture, local authorities, and environmental agencies.

One Health approach provides a framework for addressing the factors that contribute to rodent proliferation and disease transmission with sustainable solutions.

Strengthening surveillance, improving environmental sanitation, and promoting intersectoral collaboration are essential for reducing the burden of rodent-associated diseases in Sri Lanka.

Key Messages

- Rodents are associated with around 50 infectious diseases worldwide.
- Poor environmental sanitation and waste management contribute to rodent proliferation and increase disease risk.
- Climate change, and urbanization may further increase rodent-borne disease transmission.
- A One Health approach is essential for the prevention and control of rodent-borne diseases.

Compiled By:

Liyamini Karunaratne
Registrar in Community Medicine
Epidemiology Unit
Ministry of Health

References:

1. The Role of Rodents in the Emergence of Zoonotic Bacterial Threats. Pathogens 2025, https://doi.org/10.3390/pathogens14090928
2. Rodent-Borne Parasites and Human Disease: A Growing Public Health Concern. Animals (Basel). 2025 doi: .3390/ani15182681. PMID: 41007925
3. Meerburg, B.G. (2023). Public Health and Rodents: A Game of Cat and Mouse. https://doi.org/10.1007/978-3-031-27164-9_24
4. Jurišić A, Ćupina AI, Kavran M, Potkonjak A, Ivanović I, Bjelić-Čabrilo O, et al. Surveillance strategies of rodents in agroecosystems, forestry and urban environments. *Sustainability*. 2022;14(15):9233. doi:10.3390/su14159233.
5. Canters for Disease Control and Prevention. Integrated pest management: conducting urban rodent surveys. Atlanta: US Department of Health and Human Services; 2006.
6. Niroshini, D.M.C. & Boyagoda, Suyama. (2015). Identification of Sri Lankan Muroid Rodents using Hair Anatomy. Ceylon Journal of Science (Biological Sciences). 43. 17-30. 10.4038/cjsbs.v43i2.7322.
7. Singla, Neena & Babbar, Bhupinder & , Rajwinder & Kaur, Navdeep. (2022). Rodent Pests: A practical Guide for Management.
8. Baker S, Ayers M, Beausoleil N, et al. An assessment of animal welfare impacts in wild Norway rat management. *Animal Welfare*. 2022;31(1):51-68. doi:10.7120/09627286.31.1.005
9. Myllymaki, Arvo, Activities of the rodent branch of the European and Mediterranean Plant Protection Organization (EPPO) (1974). Proceedings of the 6th Vertebrate Pest Conference (1974). 33. https://digitalcommons.unl.edu/vpc6/33

 To be Continued….

Table 1: Distribution of Notified Diseases reported by Medical Officers of Health 25th – 31st May 2026 (22nd Week)

RDHS	Dengue Fever		Dysentery		Encephalitis		En. Fever		F. Poison-		Leptospirosis		Typhus		Viral Hep.		H. Rabies		Chickenpox		Meningitis		Leishman.		Tuberculosis		Leprosy		WRCD	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	T*	C**
Colombo	398	7692	3	10	0	2	0	4	0	14	4	166	0	1	0	9	0	0	10	290	2	25	0	3	42	775	0	71	**88**	**100**
Gampaha	462	4988	0	18	0	18	0	0	3	18	4	251	0	5	0	6	0	0	10	423	5	112	0	18	14	424	1	36	**82**	**100**
Kalutara	243	2395	4	24	0	3	0	7	0	16	2	207	0	5	0	11	0	0	45	421	5	34	0	2	1	225	2	40	**100**	**100**
Kandy	168	1688	2	35	2	4	0	5	0	34	6	109	0	23	1	15	0	0	10	349	14	41	0	36	2	226	2	12	**98**	**100**
Matale	23	713	1	12	0	3	0	0	1	2	5	103	0	3	0	5	0	0	3	107	1	22	8	250	2	78	0	20	**93**	**92**
Nuwara Eliya	5	292	1	28	0	3	0	3	0	14	12	144	0	24	0	11	0	0	10	273	15	89	0	0	4	113	0	3	**91**	**100**
Galle	140	2397	2	13	0	8	0	5	0	43	2	268	0	22	1	12	0	0	16	536	7	71	0	2	7	177	2	21	**98**	**100**
Hambantota	31	992	0	30	0	2	0	0	0	31	0	98	0	14	0	11	0	0	4	133	0	20	10	242	4	57	0	11	**98**	**98**
Matara	156	2437	5	10	0	1	0	1	0	11	1	182	0	13	0	15	0	0	5	329	9	97	0	77	1	69	0	12	**74**	**100**
Jaffna	15	655	3	32	1	5	0	19	0	74	2	46	2	210	0	1	0	0	4	229	4	24	1	1	4	85	0	7	**99**	**100**
Kilinochchi	1	169	1	5	0	0	0	7	0	1	15	54	0	10	0	3	0	1	1	69	0	5	0	1	1	17	0	1	**100**	**100**
Mannar	1	91	0	0	0	3	0	0	0	3	6	27	0	2	0	1	0	0	2	44	0	2	0	3	0	19	0	1	**100**	**100**
Vavuniya	5	107	0	14	3	4	1	2	0	8	25	55	0	3	0	0	0	0	0	85	2	13	0	18	2	36	1	3	**100**	**100**
Mullaitivu	3	51	2	5	0	1	0	0	0	8	1	27	0	1	0	2	0	0	0	8	1	6	0	8	1	16	0	4	**100**	**100**
Batticaloa	37	923	2	43	0	5	0	2	0	16	9	93	0	0	3	14	0	0	4	153	2	22	0	10	2	68	4	50	**100**	**100**
Ampara	5	233	0	43	0	1	0	1	0	8	0	94	0	2	0	4	0	0	4	202	5	34	0	9	0	21	0	15	**100**	**100**
Trincomalee	21	447	1	15	0	4	0	2	0	11	4	50	0	8	0	2	0	0	0	119	1	20	0	12	3	76	0	6	**98**	**95**
Kurunegala	51	926	0	14	0	11	0	3	0	62	8	181	0	20	0	6	0	0	18	455	15	139	5	189	2	144	0	35	**89**	**100**
Puttalam	16	493	0	11	0	7	0	0	0	7	8	141	0	17	0	5	2	4	0	87	6	73	0	10	1	87	1	15	**77**	**100**
Anuradhapura	8	333	0	11	0	6	0	1	0	41	0	164	1	19	0	8	0	0	17	278	5	55	12	355	6	124	1	30	**99**	**100**
Polonnaruwa	8	263	0	14	0	4	0	2	33	57	3	165	0	4	0	19	0	0	4	235	4	22	2	261	1	37	1	46	**100**	**100**
Badulla	23	466	0	27	1	7	0	3	0	7	17	138	1	21	7	78	0	0	23	224	46	122	4	59	6	114	0	11	**100**	**100**
Monaragala	17	444	0	12	0	3	0	1	0	5	4	172	0	25	0	33	0	1	4	146	0	40	4	111	0	47	0	10	**98**	**100**
Ratnapura	173	2466	0	22	0	6	0	4	0	15	18	499	0	21	0	7	0	0	12	231	2	34	0	100	5	180	0	19	**100**	**100**
Kegalle	60	1003	0	28	0	3	0	4	0	19	3	193	1	10	0	7	0	0	10	366	5	38	0	10	5	141	1	5	**99**	**100**
Kalmunai	18	582	0	26	0	0	0	0	0	15	0	44	0	1	0	1	0	0	12	312	0	19	0	0	1	56	1	22	**100**	**100**
SRILANKA	**2088**	**33246**	**27**	**502**	**7**	**114**	**1**	**76**	**37**	**540**	**159**	**3671**	**5**	**484**	**12**	**286**	**2**	**6**	**228**	**6104**	**156**	**1179**	**46**	**1787**	**117**	**3412**	**17**	506	**95**	**99**

Source: WRCD module of the EPINET.
A = Cases reported during the current week;
T*=Timeliness refers to returns received on or before 31st May, 2026.
B = Cumulative cases for the year.
Total number of reporting units 360
C**-Completeness;
C**-Completeness;

Table 2: Selected Vaccine Preventable Diseases & AFP 25th – 31st May 2026 (22nd Week)

Disease	No. of Cases by Province									Number of cases during current week in 2026	Number of cases during same week in 2025	Total number of cases to date in 2026	Total number of cases to date in 2025	Difference between the number of cases to date in 2026 & 2025
	W	C	S	N	E	NW	NC	U	Sab					
AFP[1]	00	00	01	00	00	01	00	00	00	02	01	35	28	25%
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Mumps[2]	00	02	00	00	00	00	00	00	00	02	03	65	68	-4.4 %
Measles[3]	02	00	00	00	00	00	00	00	00	02	00	09	02	350 %
Rubella[3]	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
CRS[2]	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Tetanus[2]	00	00	00	00	00	00	00	00	00	00	00	02	03	-33.3 %
Neonatal Tetanus[2]	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Japanese Encephalitis[3]	00	00	00	00	00	00	00	00	00	00	01	00	04	-100 %
Whooping Cough[2]	00	00	00	00	00	00	00	00	00	00	01	13	11	18.8 %

Key to Table 2

Provinces: **W**: Western, **C**: Central, **S**: Southern, **N**: North, **E**: East, **NC**: North Central, **NW**: North Western, **U**: Uva, **Sab**: Sabaragamuwa.

Data Sources:
Weekly Return of Communicable Diseases: Diphtheria, Mumps, Tetanus, Neonatal Tetanus, Whooping Cough.
Special Surveillance: AFP, Measles, Rubella, CRS.

AFP[1] = No Polio cases
Mumps[2], CRS[2], Tetanus[2], Neonatal Tetanus[2], Whooping Cough[2]—Clinically and/ or laboratory confirmed cases
Measles[3], Rubella[3], Japanese Encephalitis[3]— Laboratory Confirmed cases

AFP—Acute Flaccid Paralysis
CRS = Congenital Rubella Syndrome
NA = Not Available

AFP and all Vaccine Preventable Diseases except Mumps should be investigated by the MOH Personally.

Take prophylaxis medications for Leptospirosis during the paddy cultivation and harvesting seasons.

It is provided free by the MOH office / Public Health Inspectors.

Comments and contributions for publication in the WER Sri Lanka are welcome. However, the editor reserves the right to accept or reject items for publication. All correspondence should be mailed to The Editor, WER Sri Lanka, Epidemiology Unit, P.O. Box 1567, Colombo or sent by E-mail to **chepid@sltnet.lk.** The Epidemiology Unit should be formally acknowledged in all resulting publications as the primary data source.

ON STATE SERVICE

Dr. Palitha Karunapema
CHIEF EPIDEMIOLOGIST
EPIDEMIOLOGY UNIT
231, DE SARAM PLACE
COLOMBO 10