



WEEKLY EPIDEMIOLOGICAL REPORT

A publication of the Epidemiology Unit
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Typhus Fever

This is the first article of two in a series on "Typhus Fever"

Scrub Typhus

Scrub typhus, also known as bush typhus, is a type of typhus caused by the intracellular parasite *Orientia tsutsugamushi*. This Gram-negative α -proteobacterium belongs to the family Rickettsiaceae and was first isolated and identified in Japan in 1930.

The disease is transmitted to humans through the bite of certain types of trombiculid mites, commonly known as chiggers. These mites, specifically the larval stages of two closely related species, *Leptotrombidium akamushi* and *Leptotrombidium deliense*, are the primary vectors of the disease. The larvae acquire the infection from wild rodents or other small animals that serve as hosts.



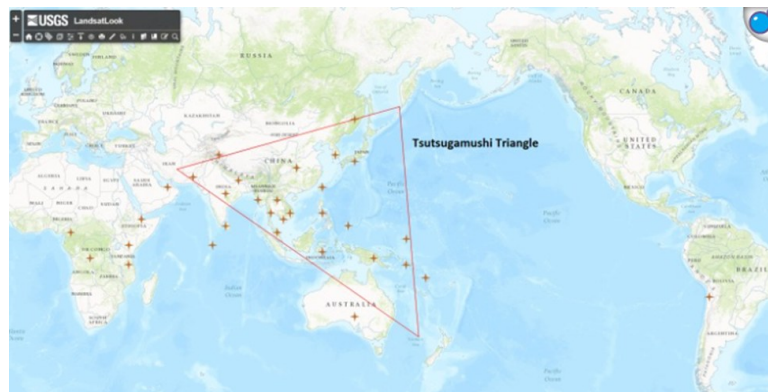
Leptotrombidium (Trombicula) - Image courtesy: kauveryhospital.com/blog/infectious-diseases/what-is-scrub-typhus

Humans become infected when bitten by these infected mite larvae, typically in areas where the mites are abundant, such as vegetation or brush.

Epidemiology

Historically, scrub typhus has been endemic in Asia, Australia, and islands in the Indian and Pacific Oceans, a region known as the "tsutsugamushi triangle." However, recent reports indicate that scrub typhus is no longer confined to this area, with cases now emerging from Africa, the Middle East, and South America. Despite these expanding regions, no autochthonous cases have been reported from North America and Europe. Scrub typhus remains prevalent in many Asian countries.

Outbreaks of scrub typhus have occurred in several regions of the Asia-Pacific. One prominent outbreak took place in Nepal between 2015 and 2017. Of the 1,239 reported cases, 67% occurred in 2016, making it the year with the highest number of infections. The case fatality rate was 5.7% in 2015 but decreased significantly to 1.1% by 2017, likely due to improvements in early diagnosis and treatment strategies.



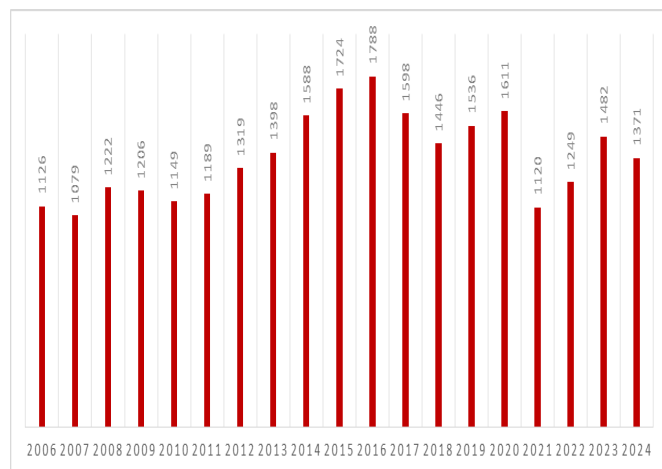
Worldwide map of countries with reported scrub typhus cases - Images courtesy: *A review of the global epidemiology of scrub typhus.* Guang Xu, David H Walker, Daniel Jupiter, Peter C Melby, Christine M Arcari

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In 2022, another outbreak of scrub typhus occurred among soldiers stationed at a coastal training area in Australia. This outbreak underscored the risk of the disease in areas where environmental conditions are conducive to the presence of vectors, such as trombiculid mites. The soldiers, who were exposed to dense vegetation and brush during their training, were at an increased risk of contracting the disease through mite bites

Sri Lanka Situation

In Sri Lanka, typhus has remained a persistent public health concern, with more than 1,000 cases reported annually from 2006 to 2024. The scrub typhus is endemic, and under the routine notification system, it is reported as typhus fever without distinguishing between different types of typhus. The number of cases has fluctuated over the years, with remarkable increases and declines. Between 2006 and 2010, incidence remained relatively stable, with annual cases ranging from 1,079 to 1,226. However, from 2011 onwards, a gradual rise was observed, peaking at 1,724 cases in 2015 and reaching the highest recorded number of 1,788 cases in 2016. Following this peak, case numbers declined slightly but remained high, fluctuating between 1,446 and 1,611 cases until 2020. In 2021, there was a significant drop to 1,120 cases, the lowest recorded in over a decade. However, the numbers began to rise again in the following years, reaching 1,482 cases in 2023 before slightly decreasing to 1,371 in 2024. These trends indicate periodic outbreaks, with the highest disease burden observed in 2015 and 2016, followed by fluctuating patterns in subsequent years.



Typhus cases in Sri Lanka from 2006 to 2024. Source: Epidemiology Unit.

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Table 1 : Water Quality Surveillance
Number of microbiological water samples January 2025

District	MOH areas	No: Expected *	No: Received
Colombo	18	108	6
Gampaha	15	90	0
Kalutara	13	78	88
Kalutara NIHS	2	12	NR
Kandy	23	138	19
Matale	13	78	1
Nuwara Eliya	13	78	0
Galle	20	120	189
Matara	17	102	111
Hambantota	12	72	14
Jaffna	14	84	NR
Kilinochchi	4	24	23
Mannar	5	30	0
Vavuniya	4	24	24
Mullatvu	6	36	31
Batticaloa	14	84	24
Ampara	7	42	3
Trincomalee	12	72	13
Kurunegala	29	174	NR
Puttalam	13	78	6
Anuradhapura	23	138	5
Polonnaruwa	9	54	9
Badulla	16	96	140
Moneragala	11	66	94
Rathnapura	20	120	96
Kegalle	11	66	0
Kalmunai	13	78	0

* No of samples expected (6 / MOH area / Month)
NR = Return not received

Table 1: Selected notifiable diseases reported by Medical Officers of Health 08th–14th Feb 2025 (07th Week)

RDHS	Dengue Fever		Dysentery		Encephalitis		En. Fever		F. Poisoning		Leptospirosis		Typhus F.		Viral Hep.		H. Rabies		Chickenpox		Meningitis		Leishmania-		Tuberculosis		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	T*	C**
Colombo	252	1695	0	4	1	2	0	0	1	5	60	1	3	1	2	0	0	13	68	0	4	0	1	24	234	100	100	
Gampaha	131	1170	1	7	1	8	0	1	0	39	11	117	0	2	1	2	0	0	21	118	3	23	1	8	31	163	100	100
Kalutara	29	267	2	7	0	1	0	0	9	10	13	107	0	0	0	2	0	0	13	87	1	5	0	0	36	101	100	75%
Kandy	50	487	0	14	0	2	0	1	0	6	2	63	4	18	0	3	0	0	12	62	0	5	0	10	6	127	100	100
Matale	38	278	2	7	0	1	0	0	1	5	5	39	0	1	0	4	0	0	0	12	0	0	6	32	3	17	100	100
Nuwara Eliya	4	39	2	14	0	1	0	2	3	43	2	29	2	15	0	0	0	0	3	38	0	2	0	0	8	49	100	100
Galle	44	366	0	9	0	2	0	0	0	17	16	117	3	21	0	0	0	0	14	114	4	26	0	0	7	73	100	100
Hambantota	15	177	0	5	0	2	0	0	0	2	3	66	1	8	1	1	0	0	13	55	0	2	9	47	2	31	100	100
Matara	34	261	0	2	0	2	0	0	0	3	15	83	3	5	0	2	0	0	7	45	1	8	3	18	6	34	100	100
Jaffna	35	321	1	16	0	1	0	2	1	10	4	98	21	140	0	0	0	1	11	41	0	4	0	0	2	28	87	93%
Kilinochchi	2	27	0	4	0	0	0	1	0	1	3	23	0	5	0	1	0	0	0	0	0	0	0	0	2	7	100	100
Mannar	3	66	0	0	0	0	0	0	0	0	0	7	0	1	0	0	0	0	1	4	0	7	0	0	0	4	100	100
Vavuniya	2	17	0	4	0	0	0	0	0	1	2	20	1	2	0	0	0	0	0	1	0	3	0	2	1	6	100	100
Mullaitivu	2	19	0	1	0	0	0	1	0	0	4	28	0	2	0	0	0	0	0	3	0	2	0	0	0	2	100	100
Batticaloa	60	437	1	45	2	5	0	0	0	3	0	15	0	1	0	7	0	0	5	43	2	7	0	1	2	19	100	100
Ampara	3	33	1	2	0	1	0	0	0	1	5	26	0	1	0	1	0	0	2	12	0	2	1	4	0	8	100	100
Trincomalee	28	203	0	17	0	1	0	0	0	13	1	34	0	3	1	1	0	0	1	22	1	7	0	3	0	8	92	100
Kurunegala	27	199	0	5	0	4	0	1	2	17	19	153	1	11	0	1	0	0	20	121	2	26	20	88	4	58	100	100
Puttalam	16	163	0	4	0	0	0	0	0	4	83	1	10	0	1	0	0	4	33	2	19	2	5	0	34	100	100	
Anuradhapura	39	162	2	5	1	3	0	0	1	7	16	113	2	8	0	4	0	0	8	43	1	11	24	149	2	40	91	100
Polonnaruwa	10	41	0	6	0	1	0	0	0	1	8	47	0	0	1	7	0	0	4	33	0	0	9	49	0	9	100	94%
Badulla	17	159	0	2	0	1	0	0	0	0	6	66	0	5	1	8	0	0	13	65	6	16	0	3	6	32	100	100
Monaragala	6	152	2	5	0	1	0	0	0	2	10	102	5	16	0	2	0	0	1	15	1	15	2	18	1	16	91	100
Ratnapura	47	382	2	18	1	2	0	2	0	6	30	262	2	8	0	1	0	0	18	68	4	26	0	9	13	63	100	100
Kegalle	29	223	0	14	0	3	0	0	1	12	11	106	0	1	1	4	0	0	22	118	3	9	0	8	5	43	100	100
Kalmunai	14	95	1	5	0	0	0	0	0	4	4	23	0	0	0	1	0	0	5	39	0	4	0	0	2	18	92	100
SRILANKA	937	7439	17	222	6	44	0	11	18	204	199	1887	47	287	7	55	0	1	211	1260	31	233	77	455	163	1224	98	99%

Source: Weekly Returns of Communicable Diseases (esurveillance.avid.gov.lk). T=Timeliness refers to returns received on or before 14th Feb, 2025 Total number of reporting units 361 Number of reporting units data provided for the current week: 358 C**=Completeness
A = Cases reported during the current week. B = Cumulative cases for the year.

Table 2: Vaccine-Preventable Diseases & AFP

08th – 14th Feb 2025 (07th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2025	Number of cases during same week in 2024	Total number of cases to date in 2025	Total number of cases to date in 2024	Difference between the number of cases to date in 2025 & 2024
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	00	01	01	00	00	00	00	00	01	03	02	10	11	-9.1%
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Mumps	00	01	00	00	01	00	00	00	00	02	08	29	37	-21.6 %
Measles	00	00	00	00	00	00	00	00	00	00	09	01	127	-99.2%
Rubella	00	00	00	00	00	00	00	00	00	00	00	00	01	-100%
CRS**	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Tetanus	00	00	00	00	00	00	00	00	00	00	00	01	00	0 %
Neonatal Tetanus	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Japanese Encephalitis	00	00	00	00	00	00	00	00	01	01	00	04	01	300 %
Whooping Cough	00	00	00	00	00	00	00	00	00	00	00	05	01	400 %

Key to Table 1 & 2

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

RDHS Divisions: CB: Colombo, GM: Gampaha, KL: Kalutara, KD: Kandy, ML: Matale, NE: Nuwara Eliya, GL: Galle, HB: Hambantota, MT: Matara, JF: Jaffna, KN: Killinochchi, MN: Mannar, VA: Vavuniya, MU: Mullaitivu, BT: Batticaloa, AM: Ampara, TR: Trincomalee, KM: Kalmunai, KR: Kurunegala, PU: Puttalam, AP: Anuradhapura, PO: Polonnaruwa, BD: Badulla, MO: Moneragala, RP: Ratnapura, KG: Kegalle.

Data Sources:

Weekly Return of Communicable Diseases: Diphtheria, Measles, Tetanus, Neonatal Tetanus, Whooping Cough, Chickenpox, Meningitis, Mumps., Rubella, CRS,

Special Surveillance: AFP* (Acute Flaccid Paralysis), Japanese Encephalitis

CRS** =Congenital Rubella Syndrome

NA = Not Available

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

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

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