



# ASEAN BIODIASPORA VIRTUAL CENTER

## DISEASE ALERT



October 2, 2024 | Issue No. 14

**First alert: 29 July 2024**

**Second alert: 02 October 2024 | Oropouche Virus Disease in the Americas and Europe**

### SUB-LOCATIONS AFFECTED

Americas (Bolivia, Brazil, Columbia, Cuba, and Peru) and European (Germany, Italy, Spain)



Source: CSIRO, CC BY 3.0, <https://commons.wikimedia.org/w/index.php?curid=35497011>

### Event Description

As of July, 2024, The Pan American Health Organization (PAHO) reported a total of 8,078 confirmed cases of Oropouche virus infection in the Americas Region with two deaths recorded. Oropouche cases have been reported in five countries in the region. Countries affected are: Bolivia, Brazil, Columbia, Cuba and Peru.

On August 9, the European Centre for Disease Prevention and Control (CDC) reported 19 imported Oropouche virus cases in Europe for the first time, with cases in Spain, Italy, and Germany. Eighteen of the cases had traveled to Cuba, and one to Brazil.

# Case distribution

Table 1. Distribution of Oropouche Virus in the Regions of Americas and Europe (2024)

| Region   | Country affected | Last reporting date | Total cases reported | Deaths reported |
|----------|------------------|---------------------|----------------------|-----------------|
| Americas | Bolivia          | July 20, 2024       | 1,906                | 0               |
|          | Brazil           | September 6, 2024   | 9,775                | 2               |
|          | Colombia         | July 20, 2024       | 74                   | 0               |
|          | Cuba             | July 20, 2024       | 76                   | 0               |
|          | Peru             | July 20, 2024       | 290                  | 0               |
| Europe   | Germany          | July 30, 2024       | 2                    | 0               |
|          | Italy            | July 30, 2024       | 5                    | 0               |
|          | Spain            | July 30, 2024       | 12                   | 0               |

# Epidemiological Information

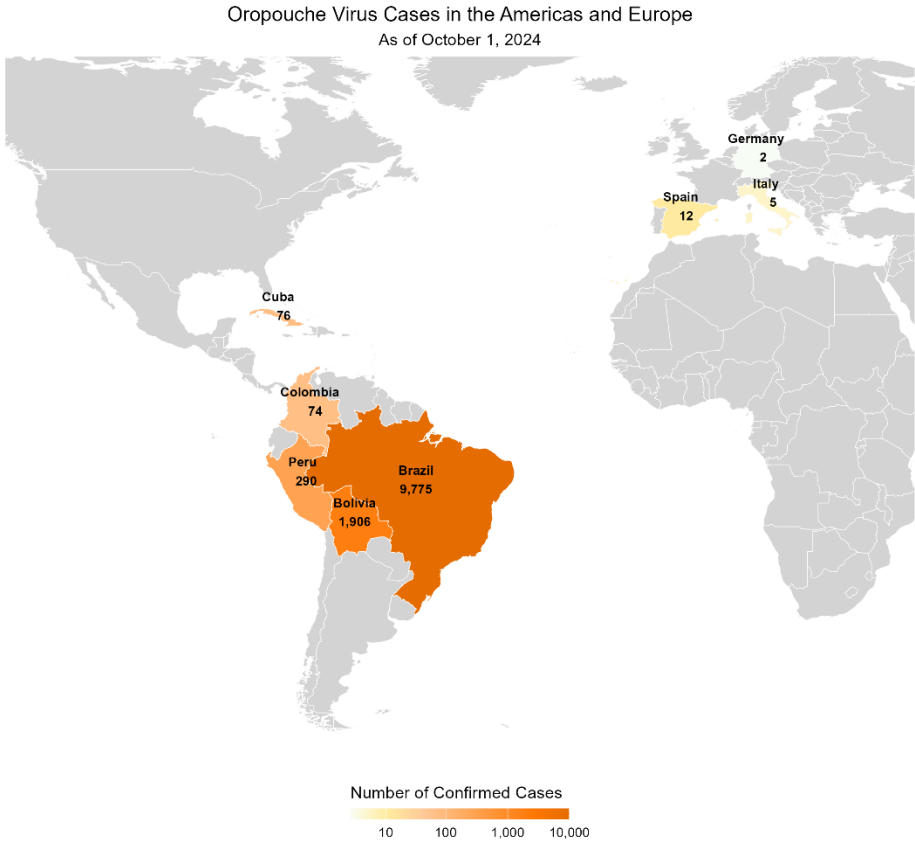


Figure 1. Global distribution of oropouche cases, From November 2023 to October 2024

- **The Plurinational State of Bolivia:** There were 1,906 Oropouche cases confirmed using reverse transcription polymerase chain reaction (RT-PCR). Transmission has been recorded in three departments: La Paz, Beni, and Pando.
- **Brazil** has confirmed 9,775 Oropouche cases, with the Amazon region being endemic (Amazonas, Rondônia, Acre, Roraima, Pará, and Tocantins). Indigenous transmission was also documented in ten non-Amazonian states.
- **Colombia** has reported 74 confirmed Oropouche cases across three departments: Amazonas (70 cases), Caquetá (1 case), and Meta (1 case). Two additional cases were identified in travelers from Tabatinga, Brazil.
- **Cuba** has reported 76 confirmed Oropouche cases since the first identification on May 27, 2024.
- **Peru** has reported 290 confirmed Oropouche cases across seven departments. No deaths associated with Oropouche virus infection have been reported.
- On August 9, the European CDC reported 19 imported Oropouche virus cases in Europe for the first time. These cases were reported in **Spain** (12), **Italy** (5), and **Germany** (2). Eighteen of the cases had traveled to Cuba, and one to Brazil.

## Response Measures:

The Brazil's Ministry of Health expanded nationwide case detection in 2023 by supplying diagnostic tests to the entire network of Central Public Health Laboratories (Lacen). In response to detected cases, the Bahia State Department of Health carried out investigations and recorded related deaths. Prevention strategies are based on control measures against the arthropod vectors and on personal protection measures. The WHO recommends the following preventive measures:

- Vector control: reducing midge populations by controlling breeding sites (natural and artificial water-filled habitats).
- Personal protection: using mosquito nets, insect repellents, repellent-treated clothing, and mechanical barriers.
- Chemical insecticides: using deltamethrin and DEET are effective against bites from *Culicoides* and *Culex* species.

Laboratory diagnosis is essential during the dengue season to confirm OROV cases, monitor outbreaks, and track disease trends.

## Disease information

- **Pathogen**

Oropouche virus, belonging to the Simbu serogroup of Orthobunyavirus in the Peribunyaviridae family, was first identified in 1955 in Trinidad and Tobago.

- **Vector**

*Culicoides paraensis* midges and *Culex quinquefasciatus* mosquitos are the main vector of the virus. Other hematophagous mosquito species, such as *Coquillettidia venezuelensis* and *Aedes serratus*, have the potential to reproduce and can be naturally infected by the virus. In the sylvatic cycle, vertebrate hosts include primates, sloths, and wild birds has been identified.

- **Transmission**

The virus is transmitted to humans primarily through the bite of the *Culicoides paraensis* midges.

- **Clinical diagnosis**

Virus detection in serum occurs within the first week and becoming undetectable after day 5. IgM antibodies appear by the end of the first week, followed by IgG antibodies. In neuroinvasive cases, serological testing is preferred as viral RNA may be absent in CSF. Plaque reduction neutralization tests (PRNTs) are employed to detect virus-specific antibodies.

- **Symptoms**

Common symptoms include fever, headache, chills, myalgia, and arthralgia. Photophobia, retro-orbital pain, nausea, vomiting, diarrhea, and hemorrhagic symptoms may occur in some patients.

### Sources:

1. CDC. (2024). Clinical overview of Oropouche virus disease. Centers for Disease Control and Prevention. Available at <https://www.cdc.gov/oropouche/hcp/clinical-overview/index.html> (Accessed: 02 October 2024)
2. European CDC (2024) *Threat assessment brief: Oropouche virus disease cases imported to the European Union*. European Centre for Disease Prevention and Control. Available at: <https://www.ecdc.europa.eu/en/publications-data/threat-assessment-brief-oropouche-virus-disease-cases-imported-european-union> (Accessed: 02 October 2024).
3. PAHO (2024) *Epidemiological Update Oropouche in the Americas region - 6 September 2024*, PAHO/WHO. Pan American Health Organization. Available at: <https://www.paho.org/en/documents/epidemiological-update-oropouche-americas-region-6-september-2024> (Accessed: 02 October 2024).
4. WHO (2024) *Oropouche virus disease - region of the Americas*. World Health Organization. Available at: <https://www.who.int/emergencies/disease-outbreak-news/item/2024-DON530> (Accessed: 02 October 2024).