

## **NOTES ON THE GREY SILVERFISH *CTENOLEPISMA LONGICAUDATUM* ESCHERICH, 1905 (ZYGENTOMA; LEPISMATIDAE) IN IRELAND**

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### **Abstract**

The occurrence of the grey silver silverfish *Ctenolepisma longicaudatum* Escherich, 1905 in Ireland is reviewed.

**Key words:** Zygentoma, Lepismatidae, *Ctenolepisma longicaudatum*, grey silverfish, Ireland, distribution.

### **Introduction**

Silverfish, firebrats and bristletails were formerly grouped in a single order, the Thysanura (Delany, 1954), but silverfish and firebrats are now recognized as belonging to a separate order, the Zygentoma (Barnard, 2011). Two species (the common silverfish (*Lepisma saccharina* Linnaeus, 1758) and the firebrat (*Thermobia domestica* (Packard, 1937)) were known from Ireland until 2016 (O'Connor and Nelson, 2012) when the grey silverfish *Ctenolepisma longicaudatum* Escherich (1905) was discovered at the Greenmount Campus, Antrim, Northern Ireland (Irish grid reference J1584) (Monteith, 2018). This record is shown on a map in Mann *et al.* (2019). *C. longicaudatum* had been discovered in Great Britain two years previously in a building at Whitley Wood, Reading, Berkshire, England (Goddard *et al.*, 2016). The species was described by the German entomologist and professor of zoology Karl Leopold Escherich in 1905 based on type material collected in the Orange Free State, Republic of South Africa. Recently, the gender of the genus was shifted from feminine to neuter, and so, the species name should be changed from *longicaudata* to *longicaudatum* (Kulma *et al.*, 2021).

In 2024, while waiting in an office in a commercial building in Castleknock, County Dublin, the author noticed a large unusual looking silverfish wandering in and out from under a carpet on a wooden floor. Unable to catch the specimen, he subsequently informed a member of staff about it and several months later was given a live individual. It was identified as a grey silverfish *C. longicaudatum* using Aak *et al.* (2019). This publication also contains a key to species which may be yet found in Ireland.

### **The new record**

**DUBLIN:** Castleknock (O0837), commercial block with offices and shops, 1 ♀ collected alive 6

June 2024 by Barbara Kelly, determined: J. P. O'Connor (Plate 1).

### **Previous Irish records**

In addition to the Antrim and Dublin records given above, the species has been reported from six other Irish sites: **ANTRIM**: Templepatrick (J2385), 13 September 2018, Rodney Monteith. **CORK**: Cork City (W67), October 2017, domestic premises, Killgerm identification; Cork City (W67), December 2017, apartments, Killgerm identification. **DUBLIN**: Balbriggan (O16), January 2021, domestic premises, iNaturalist.org. **GALWAY**: Galway City (M22), September 2019, medical center, iNaturalist.org. **MAYO**: Ballina (G21), July 2020, domestic premises, iNaturalist.org (Kulma *et al.*, 2021; NBN, 2024). (Several sites had no grid references and these have been estimated). The known Irish distribution is shown (Fig. 1).

### **Recognition of the grey silverfish in Ireland**

The grey silverfish can be easily distinguished from the ubiquitous common silverfish by its hairiness including a “beard” on the head, long caudal appendages lying at right angles to each other and long antennae (Plate 1). In the unicolored common silverfish, the middle tail appendage is shorter than half the length of the body. The grey silverfish resembles the very rare firebrat but differs in colouration on the dorsal side. The former has a grey or beige dorsal side; the latter has a clear mixed beige and black patterned dorsal side. The firebrat only grows up to 12mm compared with the up to 18mm for the grey silverfish (excluding antennae and caudal appendages). Under a microscope, the two species can be separated by an examination of the bristle combs on the dorsal plates on the second to sixth abdominal segments. The firebrat has only two of these on each side (one dorsally and one laterally), the grey silverfish has three (two dorsally and one laterally). The sex of a specimen can be ascertained using Aak *et al.* (2019).



**PLATE 1.** *Ctenolepisma longicaudatum*, ♀, Castleknock, Dublin, 6 June 2024. Photograph: J. P. O'Connor.

## Discussion

The grey silverfish is also known as the paperfish, giant, gray and long-tailed silverfish. In the early 19<sup>th</sup> Century, it was described as a nuisance pest in South Africa and Australia but may have originated in North America or the Caribbean. The species is now widespread on the continent of Europe. It has a high tolerance to starving, low humidity and temperatures. Individuals can live for seven years. They are capable of chewing on many substrates. In private residences, mechanical damage is very limited. However in libraries, museums and art galleries, irreplaceable objects in collections can become degraded or destroyed (Goddard *et al.*, 2016; Aak *et al.*, 2019; Kulma *et al.*, 2021).

Product packing, crates and boxes are the most likely candidates for transport, providing a multitude of hiding places. This species has a good dispersal ability within buildings once established (Aak *et al.*, 2019). The grey silverfish will probably soon become widely distributed indoors in Ireland.

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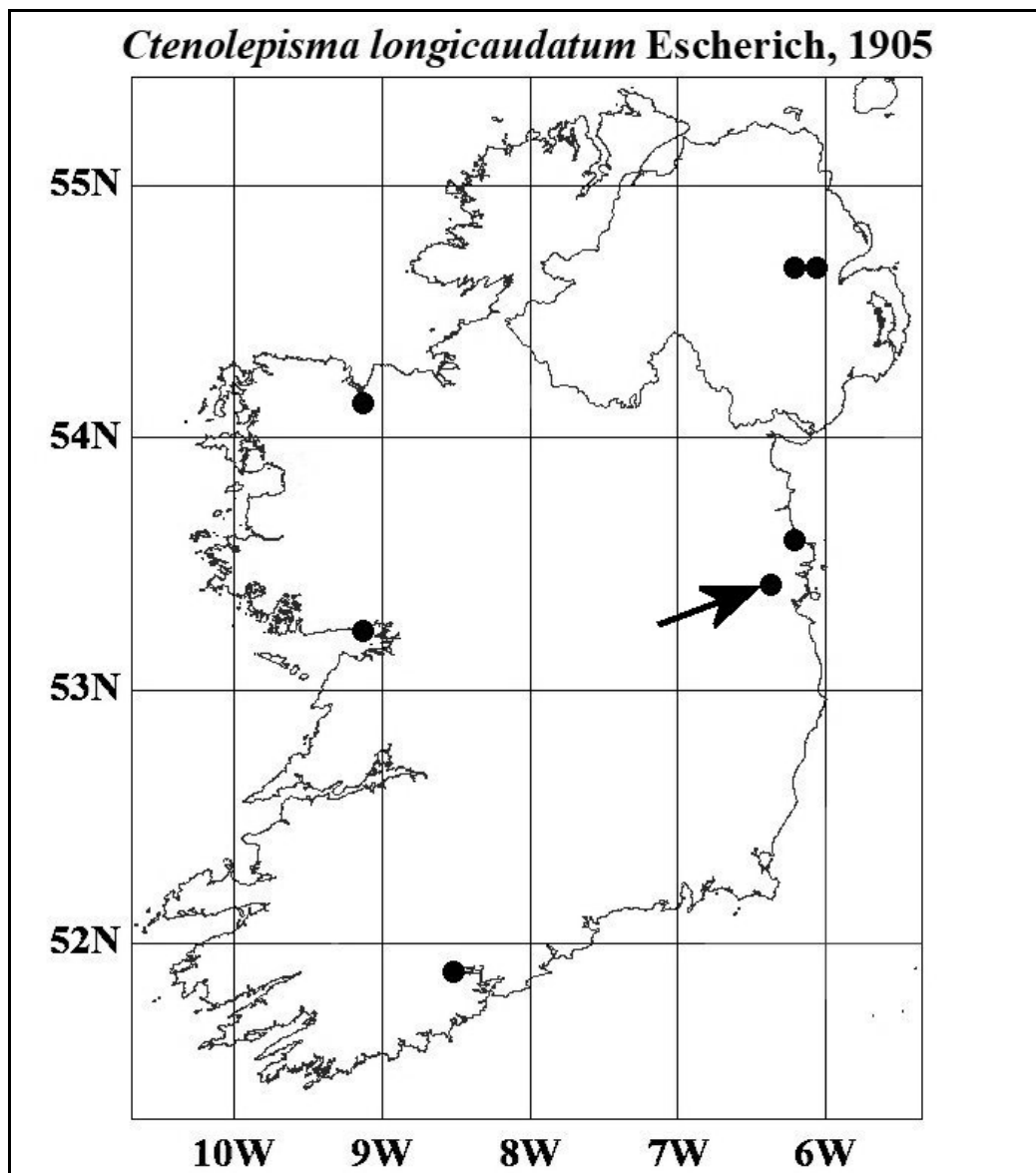
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NBN (2024) Record: 8785800 (Ctenolepisma longicaudata)  
<<https://records.nbnatlas.org/occurrences/b9937b6c-b89b-4aec-bca3-aab8d01b6f4b>>  
(accessed 20 December 2024)

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**FIGURE 1.** The known Irish distribution of *Ctenolepisma longicaudatum* Escherich, 1905. The Castleknock record is indicated.