

## **THE VOUCHED, THE UNVOUCHED AND A DIGITAL PHANTOM; FOUR SPIDERS (ARANEAE) PUBLISHED FOR, BUT NOT OCCURRING IN IRELAND**

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### **Abstract**

The gnaphosid spider *Zelotes subterraneus* (C. L. Koch, 1833) is formally deleted from the Irish list. The names of three spider species recently published for Ireland would constitute the first Irish records, however, voucher specimens were not collected. Therefore, these species have not been safely shown to be established in Ireland and the names should not be included in an Irish checklist. One of the species is now mapped for Ireland in several digital datasets from two independent putative observations. The importance of robust filtering criteria to avoid such eventualities is noted.

**Key words:** Spiders, Araneae, Ireland, checklist, deleted name, doubtful status, digital data.

### **Introduction**

The maintenance of reliable checklists of species occurring in any given country is fundamental to the study of its natural history, and it is essential that the species listed are evidenced by voucher specimens held in either a museum or private collection. The availability of vouchers allows the veracity of the checklist to be supported and, should a taxonomic issue arise in regard of a species, re-examination of the voucher material might allow its resolution. Examination of voucher material has thus led to the deletion of a number of names of misidentified spiders found on Irish checklists (Nolan, 2004, 2020).

The default position is to exclude unvouched species from checklists. However, it can be worth considering a range of grounds for rejecting a species where possible. The presence of a name on a checklist can have implications beyond merely being wrong.

Irish records of *Entelecara errata* O. P.-Cambridge, 1913, a strongly montane species, suggested it occupied in Ireland wholly atypical environments (Mackie and Millidge, 1970; Mackie, 1972). While it was not possible to locate all of the specimens involved, examination of some of the misidentified vouchers, in combination with the improbable habitat association, meant the species could be deleted. This also negated the implication that the species had very different environmental preferences in Ireland compared to other countries.

It has become a commonly accepted practice to delete a species name if it has not been

recorded for 100 years or more. The absence of a recent record of a species associated with a demonstrably negatively-impacted habitat might imply an extinction has occurred. I have argued previously there is little point to the ‘100-year rule’ if collecting has not been carried out over much of that period, as is the case in Ireland for spiders, most especially from *circa* 1930-1980 (Nolan, 2020, 2021). Keeping historical records on a checklist, until such time as their removal can be reasonably defended, can be preferable to their blunt excision. In the case of the ‘tarantula’ species, *Atypus affinis* Eichwald, 1830, a single web suggested an Irish presence, but varied historical evidence indicated it had been almost certainly introduced (Nolan, 2020). Providing a substantial explanation of the record obviates the possibility that the species will be declared ‘extinct’, which would wholly misrepresent the situation. With regard to more recent records, it can be relatively straightforward to establish the existence (or not) of voucher specimens. In the case of species new to Ireland, or which have not been substantially evidenced previously, vouchers should *always* be retained, regardless of how ‘unmistakeable’ they may be. It is possible that where a species is, apparently, readily identifiable, retaining a voucher might be felt to be unnecessary. This notion seems to be gaining ground now that evidence of a species can be presented also in digital formats e.g. photographs. The existence of readily accessible digital databases further means that records can be easily made widely available. However, ensuring the permanency and accuracy of digital records can be every bit as difficult, for very different reasons, as maintaining a preserved museum collection. The development of digital systems for holding natural history records provides a very useful facility for making available and accessing large datasets of information. However, robust filtering criteria and protocols are essential for assessing the status of species and information to be included.

### ***Zelotes subterraneus* (C. L. Koch, 1833) – formally deleted from the Irish checklist**

This taxon was first noted as Irish from Co. Wicklow (Carpenter, 1898). Thomas Workman had noted the name *Prothesima Petiverii* from county Dublin citing an unpublished record of Templeton (Workman, 1880a, b), and this name was later included under *P. subterranea* (Carpenter, 1898). Pack-Beresford added records from two additional counties (Pack-Beresford, 1907, 1909). *Zelotes subterraneus* was synonymised with *Z. apricorum* (L. Koch, 1876), under which name Bristowe published British and Irish records (Bristowe, 1939). *Z. subterraneus* was however revalidated for Britain based on old and recent material, and some investigative work was carried out in Ireland at the time (Murphy and Platnick, 1986). Helsdingen, following these authors, placed a question mark against *Z. subterraneus*’ Irish status noting that they “could not confirm” its presence in Ireland (Helsdingen, 1996). However, none of the older material had been examined. Another closely related species, *Z. longipes* (L. Koch, 1866) was deleted from the Irish list after an examination of NMINH specimens (Nolan, 2004), however, the questionable status of *Z. subterraneus* was not then addressed. A temptation to support

Helsdingen's assertion 'not in Ireland' in that note (Nolan, 2004) was resisted because female specimens had not been critically assessed other than to ensure *Z. longipes* was not involved. Also, Murphy and Platnick (1986) had provided evidence from Britain of possible hybridisation between *Z. subterraneus* and *Z. apricorum*.

A number of Irish specimens assigned to *Z. subterraneus* (or *Z. longipes*) that are held in the collections of the National Museum of Ireland, Natural History (NMINH), were dissected or examined by MN and all could be assigned to *Z. apricorum* (Table 1). Given this, the taxon *Z. subterraneus* can be formally deleted from the Irish list. MN did not include the name in a previous checklist because his doubts had been confirmed by that time (Lavery, 2019).

**TABLE 1.** Specimens from the NMINH attributed to *Zelotes (Prothesima) subterraneus*. All could be assigned to *Zelotes apricorum*.

Data label	Year coll.	♂♀	Publication or (collector)	Grid ref (or hectad assigned)
Lough Derg, Galway SE (RW), <i>Prothesima subterranea</i>	?	1♀	(Robert Welch)	?
Lambay D.R.P.B. June 1906	1906	1♀	Pack-Beresford, 1907	O35
Mount Congreve, Co. Waterford, <i>Prothesima subterranea</i>	1909	1♀	Pack-Beresford, 1909	S5310
<i>Prothesima subterranea</i> , Lough Erne Coll. Mr W. de V. Kane	1909	2♀	Pack-Beresford, 1909	H15
Howth cliffs, JNH 1909, <i>Prothesima subterranea</i>	1909	1♀	(J. N. Halbert)	O23
Riskaheen pt, Lough Derg Co Tipperary RAP 25.5.24	1924	1♂	(R. A. Phillips)	M80
Portumna, Co. Galway S RAP 4.9.24	1924	1♂	(R. A. Phillips)	M80
Nr Gort, Co. Galway S 28.6.25 RAP	1925	1♀	(R. A. Phillips)	M40
Portumna, Co. Galway S RAP 22.4.28	1928	1♀	(R. A. Phillips)	M80
Portumna, Co. Galway S RAP 11.5.30	1930	1♀	(R. A. Phillips)	M80

### **Three spiders, published but unvouched for Ireland**

The names of three spiders have been recorded from near Ballyporeen, Co. Tipperary (Voss, 2024); *Araniella agg cf inconspicua* (Araneidae), *Hygrolycosa cf rubrofasciata* (Lycosidae) and *Nerienne radiata* (Linyphiidae). The three observations were made in 2018 and 2019 but the author (SV) was not aware that they would constitute the first published records of these species for Ireland. MN contacted SV in 2025 inquiring whether voucher specimens had been retained but they had not as she was not at that time retaining preserved specimens.

Two species of *Araniella* are currently known from Ireland, *A. cucurbitina* (Clerck, 1757) and *A. opisthographa* (Kulczyński, 1905), and can be distinguished only by a careful examination of the genitalia; *A. inconspicua* is very similar to both, but adults can be distinguished in the field by the absence of lateral dark dots (Sacher, 1990). The specimen could not be collected and hence SV qualified the identification with cf. however, there is no doubt that proving the species is established in Ireland would require a voucher and critical determination of the genitalia. *Hygrolycosa rubrofasciata* is the only representative of the genus in Europe and is a rare spider in Britain where it is red-listed as Endangered (Harvey *et al.*, 2017) and associated especially with eastern fenlands. This wolf spider is difficult to confuse with other species in the field and the habitat of the site was very typical. Because the specimen could not be collected, again SV qualified the identification with cf. however, as with *A. inconspicua* further proof could not be provided in 2025 and this necessarily means there is no reliable evidence for Ireland. *Nerienne radiata* (Walckenaer, 1841) was very familiar to SV as it was resident in her garden in Germany. It was seen at Ballywilliam only in 2019 and it could have been transported to Ireland with some of her garden plants (or other garden materials), however, if this was the case, a population has not persisted there. This was an everyday species for SV in Germany so no specimen was collected. At the same time, it is possible to confuse *N. radiata* with *Linyphia hortensis*, which can be seen at the same time of the year. After so many years, SV cannot completely rule out possible confusion with another species. As with the other two species noted above, and to evidence a first occurrence in a country, a voucher specimen and genital determination are a necessity, and most especially where species can be confused. It too is red-listed in Britain as Near Threatened (Harvey *et al.*, 2017). *N. radiata* has been mapped for Ireland on the datasets of the NBDC (NBDC, 2025) and the GBIF (GBIF, 2025). A putative 1992 record of the species from Co. Down, Northern Ireland, is mapped on the NBN (NBN, 2025) and GBIF websites. MN was aware of the Co. Down record from communications with CEDaR (Centre for Environmental data and Recording), however, has not been able to locate a voucher specimen. The name does not appear in any Irish checklists/distribution lists (McFerran and Ross, 1993; Helsdingen, 1996; Cawley, 2009; Lavery, 2019) or a species inventory of spiders of Northern Ireland (McFerran, 1997).

## Conclusions

Four spider taxa published as Irish, *Zelotes subterraneus*, *Araniella agg cf. inconspicua*, *Hygrolycosa cf. rubrofasciata* and *Nerienne radiata*, should not be considered part of the Irish fauna, and not included in an Irish checklist, until voucher specimens are collected. *Z. subterraneus* can be deleted on basis of an examination of voucher specimens held in the collections of the NMINH. There is a likelihood that *N. radiata* may have been introduced but there is no evidence that it is established. It is best to address the publication of *A. agg cf. inconspicua*, *H. cf. rubrofasciata* and *N. radiata* immediately because it is all too easy for a species' name to create a footprint which can take a long time to erase should that become necessary. It would be wonderful if one or all of these three species could be detected as part of the Irish fauna.

The authors have not attempted to query exactly the path by which the record of *N. radiata* came to be mapped on the NBDC dataset. Nevertheless, and this applies to the Co. Down record in NBN and GBIF also, consultation of the checklists or inventories noted above would have flagged that the record might be either the first for Ireland, or questionable, and in either instance, to be evidenced. Until such time as *N. radiata* is demonstrated to be present in Ireland the NBDC, NBN and GBIF records remain a phantom, an illusion not evidenced in reality. Given the increasing use of such digital datasets by professionals and amateurs alike anyone could be forgiven for believing *N. radiata* to be an element of the Irish fauna. Were a checklist of Irish spiders compiled using the three datasets the name would inevitably be included. A request will be submitted to the three bodies suggesting that the Irish records of *N. radiata* be removed.

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