

Lumbricus terrestris L.

The European Lumbricid, *Lumbricus terrestris*, commonly known as the nightcrawler, has invaded new locations of Europe such as Romania, spread through large expanses of the Russian Federation, and invaded areas of Canada and northern United States that were previously glaciated and contained no native earthworms.

L. terrestris has been transported by man usually unintentionally related to agricultural activities; it is also used as a common bait species. Bait trade and the subsequent disposal of bait by anglers is a major vector for earthworm introductions. A survey conducted by Keller et al (2006) in the Upper Midwest of the USA found that *L. terrestris* was the most common species sampled in bait stores.

The litter-feeding *L. terrestris* has caused significant changes in the broadleaf forest ecosystems in North America including alteration of soil nutrient cycles, declines in soil carbon and nitrogen stock, disruption of soil faunal communities and redistribution of soil organic matter (Alban and Berry 1994; Hendrix and Bohlen 2002).

L. terrestris has invaded portions of Romania where it has almost entirely replaced endemic earthworms: *Dendrobaena clujensis*, *Fitzingeria platyura montana*, *Cernosvitovia opisthocystis*, *Dendrobaena veneta*, *Octodrilus gradinescui*, and the rare *Cernosvitovia rebeli*. This large



Photo credit: Amy Stewart

scale displacement of native earthworm communities is likely to consequent ecological effects as well (Pop & Pop, 2006). It is also believed to have replaced endemic earthworms in locations of the Russian Federation (Tiunov et al, 2006).

References:

- Alban D. H and Berry E. C., 1994. Effects of earthworm invasion on morphology, carbon, and nitrogen of a forest soil, *Applied Soil Ecology* 1: 243–249
- Hendrix, Paul F. and Patrick, J. Bohlen, 2002. Exotic Earthworm Invasions in North America: Ecological and Policy Implications. *BioScience* September 2002, Vol. 52, No. 9, Pages 801–811
- Keller, P. Reuben; Annie, N. Cox; Christine Van Loon; David, M. Lodge; Leif-Matthias Herborg and John Rothlisseberger, 2007. From Bait Shops to the Forest Floor: Earthworm Use and Disposal by Anglers. *Am. Midl. Nat.* 158:321–328 2007
- Pop, Victor V. and Pop, Adriana Antonio. 2006. Lumbricid earthworm invasion in the Carpathian Mountains and some other sites in Romania. *Biol Invasions* (2006) 8:1219–1222.
- Tiunov, A.V., Hale, C.M., Holdsworth, A.R. 2006. Invasion patterns of Lumbricidae into the previously earthworm-free areas of northeastern Europe and the western Great Lakes region of North America. *Biol Invasions* (2006) 8:1223–1234.



SPECIES SURVIVAL COMMISSION

[Click here to view archives of previous weeks' species](#)