

Prostoma jenningsi (A ribbon worm)

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So far, this animal is known from a single pond near Croston and from nowhere else in the world. Dr J. O. Young of Liverpool University discovered it in 1969. It was described by him and by Professor Ray Gibson of Liverpool John Moores University in 1971 ⁽¹⁾.

It is a slender, soft, reddish-brown freshwater nemertean worm, with 4-6 small black eyespots arranged in a rectangle on the upper surface of the head. The maximum length recorded is 2cm.

Nemertean species vary in size from a few millimetres to up to 30m. They tend to be long and thin, hence they are sometimes referred to as 'bootlace' or 'ribbon' worms. Another name given to them is 'proboscis worm'. This is because of they possess an internal 'proboscis organ' that they can shoot out to half their body length to capture prey.

Prostoma jenningsi is carnivorous, feeding on oligochaete worms. It appears to be potentially capable of breeding throughout the year, although peak reproductive activity occurs during the late autumn to early spring period. Numbers of individuals are lowest during April-May, coinciding with maximal plant growth.

Certain identification of the species requires detailed histological study of its internal morphology.

Main Habitat(s): The pond it is found in was formerly a clay-pit. The animal seems to occur mainly around the pond's margins particularly among the beds of common reed.

National Status

This status of this species is given in the British Red Data Book as 'Insufficiently Known'. This is, in part, because it is considered "unlikely that it would be recorded in general aquatic invertebrate surveys."

A Species Statement was included in the UK BAP but this incorrectly stated that the species had not been recorded since 1978. Its continued presence at Croston was confirmed in 1999.

Until such times as it is reported from another place, the Croston population should be regarded as the only wild population in the world.

Regional status

Intensive searches of more than 200 other ponds in North West England (Lancashire, Merseyside and Wirral) have failed to reveal other populations of this species.

Local status

This is the only species that, so far as is known, is endemic to this county alone.

Current factors affecting the Species

The pond in which the species occurs is the only known location worldwide for *Prostoma jenningsi* and, therefore, the proper management of this site must be considered crucial to survival of this species in the short term.

Management of the pond and adjoining land appears to be under the control of at least three separate bodies. The co-operation of all relevant landowners and land managers is vital to maintain the biological significance of the site.

Cattle are known to wade in the pond margins where the nemerteans are mainly found. How, or if, there is any threat to the population from this activity is currently unknown, but excessive trampling of the reedbeds could pose a problem.

Treatment of the pond some years ago (around 1978) with an algicide appears not to have affected the nemertean population but chemical usage should be avoided in the future.

The pond is regularly used by a local angling society and they have an interest in ensuring that it remains unpolluted. Continued co-operation from local anglers is essential to avoid disturbance to bank areas where the nemerteans are known to be most abundant.

It is unknown whether excessive predation by fish or other animals inhabiting the pond poses any threat to *P. jenningsi*. There is a need for considerable investigation of the species' ecology and general biology.

Until such times as further wild populations are discovered or new ones established, this species must be considered to be at risk due to its reliance on a single site.

Current Action / Mechanisms

Prostoma jenningsi is not afforded any specific legal protection at present. (It is not listed, for example, in any Schedule of the Wildlife and Countryside Act 1981). Inclusion under Section 9 may or may not be a worthwhile objective. Changes to the law to further discourage the introduction of alien species to aquatic habitats are currently under discussion. Such changes might prove helpful in respect of *P. jenningsi*. Unconfirmed reports that coldwater aquarium fishes have been 'dumped' in the pond have caused concern.

A Countryside Stewardship Agreement is being negotiated over the land in which the pond is situated. MAFF have been advised that fencing of sections of the pond margin would be advisable to prevent excessive poaching.

The secretary of the Angling Society has contacted all society members to emphasise the biological significance of the pond.

Beyond sporadic searches for the species there are no current research activities being carried out. Previous studies are limited to the original description of the species¹ and preliminary ecological investigations⁽²⁾.

In conjunction with the Martin Mere Wildfowl Reserve, proposals for establishing a second population of the nemertean in ponds on the Reserve are being considered.

Objectives, targets and proposed actions for *Prostoma jenningsi* in Lancashire

Broad Objective:	A. Maintain population at existing site			
Operational Objective	Action Required (Priority)	Partners	Time-scale	Type

1. Safeguard the site.	1. Monitor planning applications to identify development proposals with the possibility of having an impact on the Croston pond BHS. (Medium)	Chorley BC, LCC, BHS P/ship	O	SS
	2. Consider designating the pond as a SSSI. (Low)	EN	L	SS
	3. Control access to site to deter undesirable usage. (Low)	Angling Society	O	SS
2. Monitor the population of P. jenningsi	1. Conduct annual surveys to confirm the status of the population. (High)	LU	O	RM
3. Manage the pond and surrounding land in conformity with current knowledge about ecology of P. jenningsi	1. Set up mechanisms to liaise with Angling Society, landowners and other landmanagers. (High)	BHSP	S	A
	2. Ensure Countryside Stewardship Agreement relating to site takes account of P. jenningsi. (High)	MAFF	S	LM
	3. Fence pond margins to protect pond vegetation from trampling by cattle. (High)	Land-owner	S	LM
	4. Create and maintain a habitat buffer around pond as barrier to pesticides. (High)	Land-owner	O	LM
	5. Monitor restocking with fish to ensure that fish population does not reach a level that threatens P. jenningsi. (Medium)	Angling Society	O	LM
4. Review designations and legal mechanisms that may assist in protecting the	1. Consider upgrading the Red Data Book status of the species to RDB1 Endangered. (Medium)	EN, JNCC	M	P

population.	2. Consider listing the species under Section 9 of the Wildlife and Countryside Act 1981. (Medium)	EN	M	P
	3. Lobby for increased legal protection for native aquatic biodiversity from introduction of alien species. (Medium)	WT	S	PR
Broad Objective:	B. Investigate other ponds in the area of western Lancashire for presence of <i>Prostoma jenningsi</i>			
Operational Objective	Action Required (Priority)	Partners	Time-scale	Type
1. Design and implement systematic survey for new sites for <i>P. jenningsi</i> between 2001 and 2003.	1. Identify area and ponds to be targeted for search. (High)	WT, BHS P/ship, LCC	S	RM
	2. Design and test survey methodology. (High)	LU,WT	S	RM
	3. Seek access permission to visit sites (High)	BHSP, WT,	S	RM
	4. Conduct survey of ponds using methodology. (High)	LU, WT	M	RM
Broad Objective:	C. Establish new populations of this species at suitable protected and managed sites			
Operational Objective	Action Required (Priority)	Partners	Time-scale	Type
1. Find suitable ponds on five sites in western Lancashire and attempt to establish new populations of <i>P.jenningsi</i> .	1. In 2001 introduce <i>P.jenningsi</i> into selected ponds at Martin Mere Wildfowl and Wetlands Trust Reserve. (High)	WWT	S	LM
	2. Between 2002 and 2005 introduce the species into ponds at a further four sites. (Medium)	LWT	L	LM
2. Monitor introduction sites	1. Conduct annual surveys to confirm the status of the populations. (Medium)	LU, LWT	O	RM
Broad Objective:	D. Investigate the ecology and general biology of the species to inform			

	action for its conservation			
Operational Objective	Action Required (Priority)	Partners	Time-scale	Type
1. Collect data to be used in planning conservation measures for this species.	1. Plan and initiate programmes of research (High)	LU	O	RM
Broad Objective:	E. Promote <i>Prostoma jenningsi</i> as a flagship species in the Lancashire BAP			
Operational Objective	Action Required (Priority)	Partners	Time-scale	Type
1. Raise public awareness of the local and national importance of the species.	1. Establish and publicise a new population at a publicly accessible site (see C.1.1. above) (High)	WWT	S	PR
	2. Produce articles and press releases relating to this species for local media and newsletters. (Medium)	WWT, LWT	O	PR

Related Action Plans:

- Arable HAP
- Great crested newt SAP

References & additional reading:

1. Gibson, R. & Young, J. O. (1971). *Prostoma jenningsi* sp. nov, a new British freshwater hoplonemertean. *Freshwater. Biology.* 1, pp. 121-127.
2. Gibson, R. & Young, J. O. (1976) Ecological observations on a population of the freshwater hoplonemertean *Prostoma jenningsi* Gibson and Young 1971. *Arch. Hydrobiol.* 78, pp. 42 - 50.

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