

Species Listing PROPOSAL Form:
Listing Endangered, Threatened, and Special Concern Species in Massachusetts

Scientific name: *Floridobia winkleyi*

Current Listed Status (if any): SC

Common name: New England Siltsnail

Proposed Action: Add the species, with the status of: _____ Remove the species Change the species' status to: _____

Change the scientific name to: _____

Change the common name to: _____

(Please justify proposed name change.)

Proponent's Name and Address:

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Association, Institution or Business represented by proponent: NHESP

Proponent's Signature:



Date Submitted:



Please submit to: Natural Heritage & Endangered Species Program, Massachusetts Division of Fisheries & Wildlife, 100 Hartwell St. Suite 230, West Boylston, MA 01583

Justification

Justify the proposed change in legal status of the species by addressing each of the criteria below, as listed in the Massachusetts Endangered Species Act (MGL c. 131A) and its implementing regulations (321 CMR 10.00), and provide literature citations or other documentation wherever possible. Expand onto additional pages as needed but make sure you address all of the questions below. The burden of proof is on the proponent for a listing, delisting, or status change.

(1) Taxonomic status. Is the species a valid taxonomic entity? Please cite scientific literature.

Yes. Thompson, F.G. and R. Hershler. 2002. Two genera of North American freshwater snails: *Marstonia* Baker, 1926 resurrected to generic status, and *Floridobia*, new genus (Prosobranchia, Hydrobiidae, Nymphophilinae). *The Veliger* 45: 269-271.

Species was recommended for listing in 1992 with a known distribution from 6 locations in northeastern Massachusetts (Smith, 1992). Four of those six sites were resurveyed in 2006, with populations observed at similar sizes or greater than historic observations (Cordeiro 2007). The remaining two sites were never revisited. Given the persistence of the known populations, and extensive habitat beyond what has been surveyed, we recommend this species for delisting from MESA regulation.

(2) Recentness of records. How recently has the species been conclusively documented within Massachusetts?

2006. Jay Cordeiro resurveyed D.G. Smiths sites and added 2.

(2) **Native species status.** Is the species indigenous to Massachusetts?

Yes. Davis, G.M. and M. Mazurkiewicz. 1985. Systematics of *Cicinnatia winkleyi* (Gastropoda: Hydrobiidae). Proc. Phil. Acad. Nat. Sci. 137: 28-47.

(3) **Habitat in Massachusetts.** Is a population of the species supported by habitat within the state of Massachusetts?

Yes. We have six documented populations from seven sites. Four have been identified as extant since 2006, the remaining two are currently listed as historic, but have not been revisited since original documentation in late 1980's. Habitat is protected under local, state and federal wetland protection legislation, and expansive habitat exists beyond occupied locations (see Figure 3 and Section 8(d))

(5) **Federal Endangered Species Act status.** Is the species listed under the federal Endangered Species Act?

No federal status.

(6) Rarity and geographic distribution.

(a) Does the species have a small number of occurrences (populations) and/or small size of populations in the state? Are there potentially undocumented occurrences in the state, and if so, is it possible to estimate the potential number of undocumented occurrences?

The species is documented from 7 sites (6 element occurrences) in Massachusetts along the Merrimack and Artichoke Rivers, the Egypt River, Mill River all in Newbury, West Newbury, Ipswich and Rowley. It very likely occurs at other similar sites of which there are dozens.

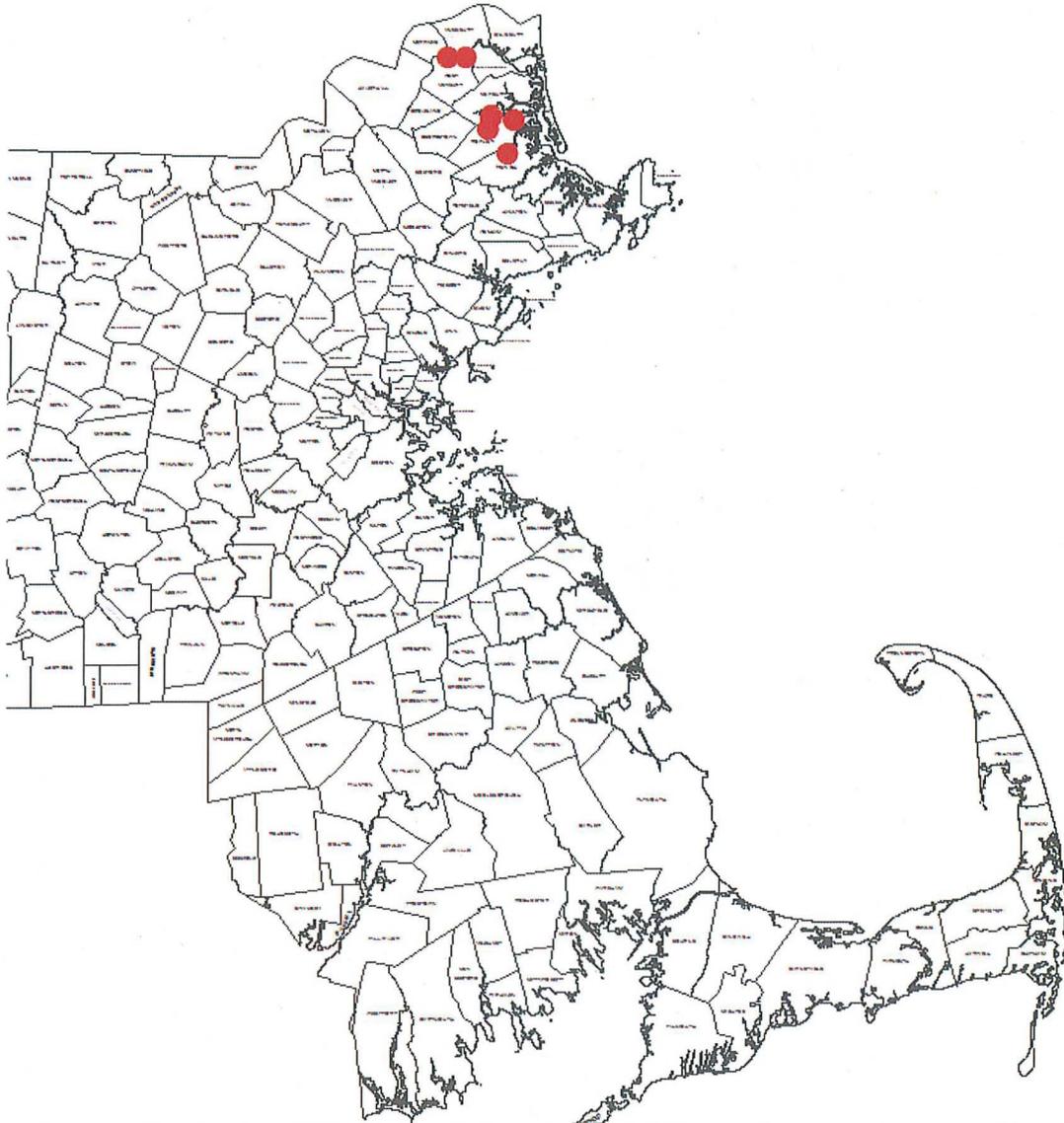


Figure 1: Distribution of *Floridobia winkleyi* (Pilsbry, 1912) in northeastern Massachusetts.

(7) Trends.

(c) Is the species decreasing (or increasing) in state distribution, number of occurrences, and/or population size? What is the reproductive status of populations? Is reproductive capacity naturally low? Has any long-term trend in these factors been documented?

Populations appear to be stable based on comparisons between recent surveys and earlier observations (Table 1). Historic populations were verified in 2006 at all sites resampled, and often in higher abundances. No standardization of effort was reported to compare densities or capture efficiency. The total number of sites initially surveyed between 1986-1990 was never reported, and only those with historic presences were revisited in 2006.

Table 1. Number of individuals collected in historic (1986-1990) and current surveys (2006).

Element Occurrence #	# Animals collected or observed	
	1986-1990 Survey	2006 Survey
1	42	Never resampled
2	41	103*
3	2	3
4	5	80
5	1	200
6	“Abundant”	Never resampled

* numbers collected from two sites: historic site and 300 m downstream.

(8) Threats and vulnerability.

(d) What factors are driving a decreasing trend, or threatening reproductive status in the state? Please identify and describe any of the following threats, if present: habitat loss or degradation; predators, parasites, or competitors; species-targeted taking of individual organisms or disruption of breeding activity.

No decreasing trend has been established. Populations have been verified at four of the six historic sites, the remaining two have not been resurveyed. Smith (1992) listed “unregulated development of areas adjacent to the drainage systems containing this species.” However, the freshwater headlands of these tidal rivers where the species occurs are protected by state and local wetlands protection acts, and multiple sites are included within protected habitat of other MESA listed plants and animals. Due to the frequency of inundation, *Phragmites australis* does not appear to be altering these habitats.

F. winkleyi appears to occur in freshwater tidal mudflats within oligohaline waters, often at the edge of salt marshes (Figure 3). This habitat is abundant in northeastern Massachusetts, and the species is likely present in other locations that have not yet been sampled. In accordance with the Guiding Principles for adding or removing species from the MESA list (NHESP 2008), decisions should be based on an “assessment of the amount, quality and spatial configuration of habitat” when data on population status and trends are insufficient. We believe that the distribution of this species is underrepresented by sampling artifact, and that sufficient habitat is available and protected through local, state, and federal wetland protection acts.

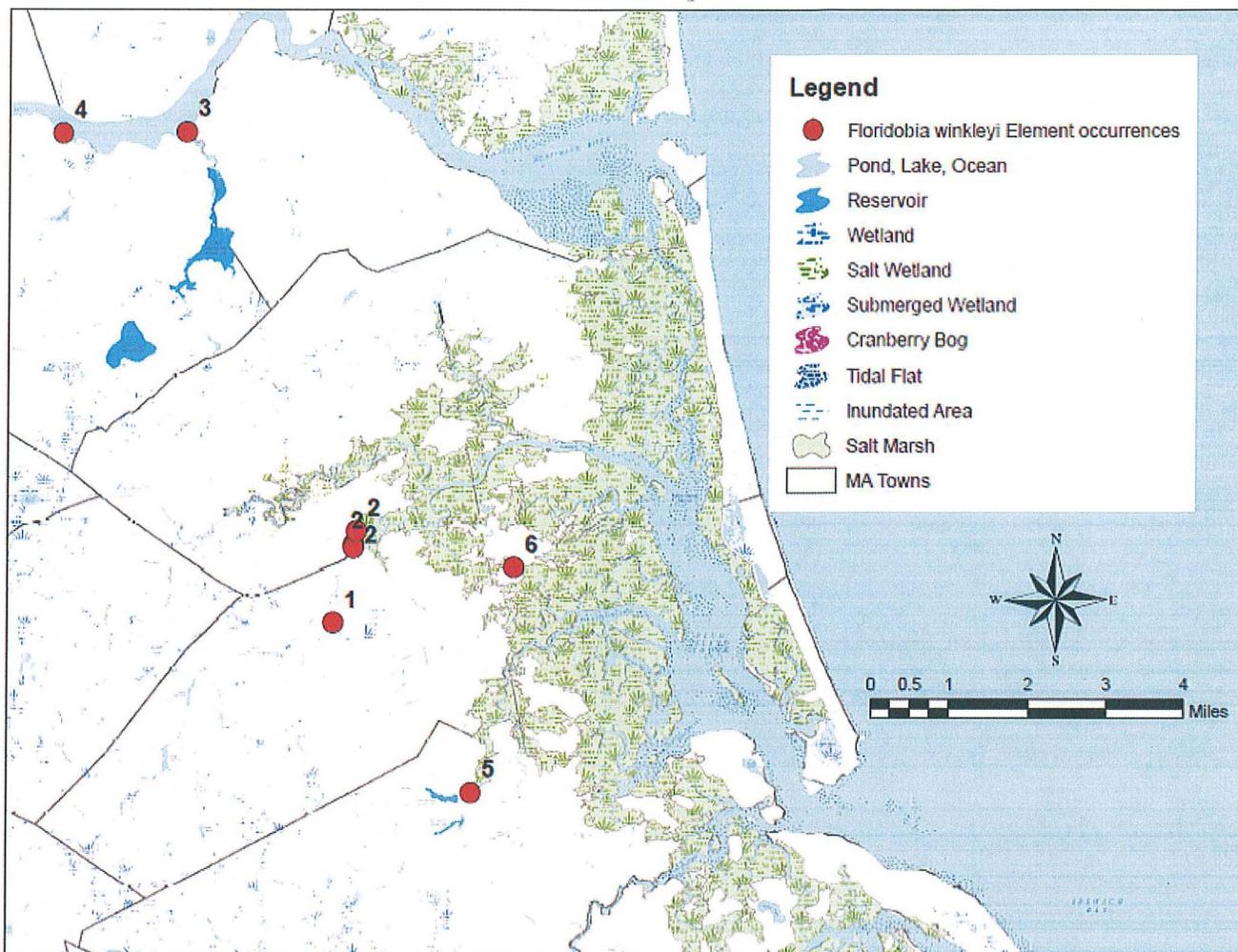
F. winkleyi

Figure 3: *Floridobia winkleyi* Occurrences and Salt Marsh distribution in northeastern Massachusetts. Element Occurrences are labeled with EO number referenced in Table 1.

(e) Does the species have highly specialized habitat, resource needs, or other ecological requirements? Is dispersal ability poor?

The populations are found in small, usually less than 50 m long riparian mudflats where they are found in populations numbering in the hundreds of individuals. It appears to be associated with oligohaline waters but also occurs in freshwater (salinity range 0.5-3.0 ppt, Smith 1992) and in one occurrence, a drainage ditch.

Conservation goals.

What specific conservation goals should be met in order to change the conservation status or to remove the species from the state list? Please address goals for any or all of the following:

(a) State distribution, number of occurrences (populations), population levels, and/or reproductive rates

Although there are probably more sites occupied than are documented many of them are difficult to access.

(b) Amount of protected habitat and/or number of protected occurrences

Current distribution and habitat is protected under state and federal wetland protection legislation.

(c) Management of protected habitat and/or occurrences

No current management or protection outside of wetland protection legislation is recommended.

Literature cited, additional documentation, and comments.

Cordeiro, J. 2007. Field observation forms submitted to Massachusetts Natural Heritage & Endangered Species Program.

Davis, G.M. and M. Mazurkiewicz. 1985. Systematics of *Cicinnatia winkleyi* (Gastropoda: Hydrobiidae). Proc. Phil. Acad. Nat. Sci. 137: 28-47.

NatureServe. 2014. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available <http://explorer.natureserve.org>. (Accessed: March 18, 2014).

NHESP. 2008. *Listing Endangered Species in Massachusetts: The Basis, Criteria, and Procedure for Listing Endangered, Threatened, and Special Concern Species*. Natural Heritage & Endangered Species Program, Massachusetts Division of Fisheries and Wildlife. 30pp.

Smith, D.G. 1992. Selected freshwater macroinvertebrates proposed for special concern status in Massachusetts, Part III. Draft listing proposal to Massachusetts Endangered Species Act.

Thompson, F.G. and R. Hershler. 2002. Two genera of North American freshwater snails: *Marstonia* Baker, 1926 resurrected to generic status, and *Floridibia*, new genus (Prosobranchia, Hydrobiidae, Nymphophilinae). The Veliger 45: 269-271.