

**Endangered Species Technical Advisory Committee**  
**Aquatic Invertebrates**  
**Illinois Natural History Survey, Champaign, IL**  
**2 May 2017**

Approved by the Illinois Endangered Species Protection Board at the 188<sup>th</sup> meeting, November  
13, 2020

COMMITTEE MEMBERS PRESENT: Kevin Cummings, Dr. Ed DeWalt, Dr. Jochen Gerber,  
Dr. Leon Hinz, Dr. Jim Lamer, Dr. Jeff Laursen, Diane Shasteen, Dr. Chris Taylor, Jeremy  
Tiemann, Dr. Matt Whiles

COMMITTEE MEMBERS ABSENT: Dr. Steve Taylor

OTHERS PRESENT: Dr. Tracy Evans (ESPB), Randall Schietzelt (ESPB, moderator)

1. Call to Order, Roll Call of ESTAC Members, and Introduction of Guests

- Meeting was called to order at 10:32 a.m.

2. Adoption of Agenda

- Moved by Matt Whiles. Seconded by Jeremy Tiemann. Approved unanimously.

3. Review of Listed Aquatic Invertebrate Species

- Stonefly:
  - *Prostoia completa* is now known as *P. ozarkensis* as per Ed DeWalt's statement  
-Hutchins Creek is the only known location for this species. Local graveling  
may be degrading the stream.
  - Stonefly-*Diploperla robusta* - leave as designated by Ed DeWalt's suggestion  
-It is found in the Russell Duffin Nature Preserve in Forest Glen.  
-Recent data show low numbers of individuals of this species are present.
  - No more additions of aquatic insects were suggested by Ed DeWalt.
  - Additions of species are hindered by lack of data, which is true for all groups  
considered below.
- Mayflies and Caddisflies: Ed DeWalt noted six species would qualify for protected  
status, but all six are on protected properties. This may be enough current protection.
- Crayfish: These are good as is according to Chris Taylor - no changes are proposed.
  - Species: *Orconectes indianensis* (Indiana Crayfish)  
*Orconectes kentuckiensis* (Kentucky Crayfish)  
*Orconectes lancifer* (Shrimp Crayfish)  
*Orconectes placidus* (Bigclaw Crayfish)
  - Chris Taylor requests funding to examine the status of *Orconectes lancifer*  
(Shrimp Crayfish)  
-This species is found in Alexander County, and has not been collected since  
1999.
  - 75% of crayfish species have been declining across the U.S.
  - Evaluation of these taxa is hindered by lack of data.

-State Wildlife Grants (SWG) are the only real funding source for research right now and those funds are very limited.

- Amphipods and Isopods: No changes are proposed, no work is being done except for *G. acherondytes*, which is federally endangered.
  - Species: *Caecidotea lesliei* (Isopod)
    - Crangonyx anomalus* (Anomalous Spring Amphipod)
    - Crangonyx packardi* (Packard's Cave Amphipod)
    - Gammarus acherondytes* (Illinois Cave Amphipod)
  - These taxa are also hindered by lack of data and no recent observations exist.
- Odonates: Since they are designated as "terrestrial invertebrates", they will be reviewed by another ESTAC committee. Tim Cashatt, the main expert on this species, has retired. No one is working on this species and little new information is coming in. Members thought that maybe this group should be moved to the aquatic invertebrates category.
  - Species: *Somatochlora hineana* (Hine's Emerald Dragonfly)
- The Committee suggests the need to build a prioritized list of aquatic invertebrates from the list produced for the State Wildlife Action Plan revision that was submitted a couple years ago. These could be proposed for future SWG (State Wildlife Grants) funding.
- Mussels: Seven - 9 changes were proposed.
  - Species with no proposed change in their status:
    - Cumberlandia monodonta* (Spectaclecase)
    - Ellipsaria lineolata* (Butterfly)
    - Epioblasma torulosa* (Northern Riffleshell)
    - Epioblasma triquetra* (Snuffbox)
    - Fusconia ebena* (Ebonyshell)
    - Lampsilis fasciola* (Wavy-rayed Lampshell)
    - Lampsilis higginsii* (Higgins Eye)
    - Leptodea leptodon* (Scaleshell Mussel)
    - Plethobasus cooperianus* (Orangefoot Pimpleback)
    - Plethobasus cyphus* (Sheepnose)
    - Pleurobema clava* (Clubshell)
    - Pleurobema cordatum* (Ohio Pigtoe)
    - Potamilus capax* (Fat Pocketbook)
    - Ptychobranhus fasciolaris* (Kidneyshell)
    - Quadrula cylindrica* (Rabbitsfoot)
    - Simpsonaias ambigua* (Salamander Mussel)
    - Toxolasma lividum* (Purple Lilliput)
    - Villosa iris* (Rainbow)
  - It was proposed to delist 3 species: *Alasmidonta viridis* (Slippershell), *Ligumia recta* (Black Sandshell), and *Villosa lienosa* (Little Spectaclecase)
    - *Alasmidonta viridis* (Slippershell)
      - It is a headwater stream specialist.
      - It is found in 17 watershed basins.
      - This species can do well in agricultural ditches.
      - It is a smaller species that has been historically hard to survey.
      - Currently this species is somewhat common.
    - *Ligumia recta* (Black Sandshell)

- It is actively propagated in Wisconsin for introductions.
- This species is doing well in the Rock and Kankakee rivers. There is good evidence of recruitment.
- The walleye is the host species for the glochidia. This mussel can be reintroduced along with walleye stocking.
- *Villosa lienosa* (Little Spectaclecase)
  - A new population has been found in the Cache River and it is doing well.
  - Illinois is on the national periphery of the western range for this species.
  - Good populations exist in the Vermillion and Embarras river basins.
- Add as Threatened: *Theliderma metanevra* (Monkeyface), and *Lasmigona costata* (Flutedshell)
  - *Theliderma metanevra* (Monkeyface)
    - Small populations exist for this species.
    - It is doing well in the Spoon, Upper Sangamon, and Kankakee rivers
    - Low populations of this species exist in the Vermillion River.
    - There has been a 55-56% range reduction in this species.
    - There is recruitment in the Spoon River, but no evidence of recruitment from other rivers in the State.
    - A lot of consultants have surveyed the historic range of this species in the Mississippi and Wabash rivers.
  - *Lasmigona costata* (Flutedshell)
    - Found in the Rock, Kankakee, and Vermillion rivers.
    - Water temperature may impact survivorship of this species.
    - This species has a low relative abundance. There has been a 55% range reduction over time of this species. The remaining populations are very fragmented.
    - This is a species of medium-sized streams.
    - There is no evidence of recruitment for this species, and many populations are known from only one individual.
- Elevate from Threatened to Endangered: *Elliptio dilatata* (Spike) and *Cyclonaias tuberculata* (Purple Wartyback)
  - *Elliptio dilatata* (Spike)
    - The populations of this species have really shrunk. Some populations have only a single individual, and there is no evidence of recruitment.
    - This species is doing OK in the Kankakee and Iroquois rivers. It is doing poorly everywhere else.
  - *Cyclonaias tuberculata* (Purple Wartyback)
    - Found in the Wabash, Kankakee, and Vermillion rivers. It is doing well in the Kankakee, where the highest diversity is found.
- Nominations above were upheld by committee
- Snails: Jeremy Tiemann and Kevin Cummings provided information.
  - Species: *Discus macclintocki* (Iowa Pleistocene Snail)
  - Fontigens antroecetes* (Hydrobiid Cave Snail)

*Lithasia obovata* (Shawnee Rocksnail)

- There is only one record for the Iowa Pleistocene Snail in Illinois.
- The Hydrobiid Cave Snail is known from St. Clair County, and it is federally listed.
- No changes are proposed at this time. Decisions on these species are all hindered by lack of data.
- Most of the data is stream oriented for snails. Other habitats need surveys.
- Jochen Gerber suggested that work is especially needed in glacial and floodplain lakes in the northern half of the state.

4. Discussion of Potential Additions of Aquatic Invertebrate Species to the Illinois List of Endangered and Threatened Species

- See above discussion
- The DNR has funded a lot of good research and data collection for freshwater mussels. This has resulted in good data for those species. The committee would like to see other taxa getting that level of support so more properly manage all the other aquatic invertebrate species on the Illinois Endangered Species List.

5. Approval of Recommendations for Changes to the Aquatic Invertebrate Sections of the Illinois List of Endangered and Threatened Species

- The only changes proposed were for mussels.
- Add as State Threatened: Flutedshell (*Lasmigona costata*)  
Monkeyface (*Theliderma metanevra*)
- Delist from State Threatened: Slippershell (*Alasmidonta viridis*)  
Black Sandshell (*Ligumia recta*)  
Little Spectaclecase (*Villosa lienosa*)
- Upgrade from Threatened to Endangered: Spike (*Elliptio dilatata*)  
Purple Wartyback (*Cyclonaias tuberculata*)
- The committee was unsure if the Elktoe (*Alasmidonta marginata*) should be added to the Threatened list. This species should be watched for the next review.

6. Assignment of ESTAC Members to Complete Petition Forms for Recommended Changes or Additions to the Illinois List of Endangered and Threatened Species (Petitions to be presented to the Illinois Endangered Species Protection Board for preliminary approval)

- Jeremy Tiemann and others will prepare the petitions for changes to the mussels.
- Moved by Matt Whiles. Seconded by Ed DeWalt. Unanimous approval.

7. Public Comment Period (3 minutes per person)

- None

8. Other Business (Topics may be discussed, but no actions can be taken)

- None suggested

9. Adjournment

- 12:15 p.m.

*Submitted by Randall Schietzelt*