

## Thirty-six Species Added to the “Shiawassee Ark” in 2008

*January 30, 2009*

In many respects, Shiawassee National Wildlife Refuge is like an ark for wildlife in Mid Michigan. Indeed, an aerial view of the refuge reveals a large patch of habitat bounded by a sea of agricultural fields and residential development. Staff, volunteers, and cooperative researchers found thirty-six species previously unknown on the refuge in 2008. These plants and animals will continue to have a place to live as surrounding areas become less suitable to survive.

Many species were found incidentally while conducting refuge operations. However, the refuge made a targeted effort to learn more about its freshwater mussels. This effort yielded eighteen new species for the refuge, including lilliput (state-listed endangered), pink papershell (state-listed threatened), and ellipse (state-listed special concern).



*The lilliput is listed as an endangered species in Michigan. Steven F. Kahl/USFWS; 8/2008*

Perhaps the most unusual new species was the black-bellied whistling duck. One was seen for three days at the refuge by staff. This is only the second record for this species in Michigan. The very northern edge of its range is typically in southern Texas and Arizona. The bird may have been caught in the remnants of Hurricane Ike which traveled from the Gulf Coast to the Midwest just prior to the bird being found.



*A digiscoped picture of the black-bellied whistling-duck, facing right in center of photo, mingling with a flock of mallards. David J. Peters/USFWS; 10/2008*

One new species was found as a direct result of habitat restoration efforts on the refuge. Two singing male grasshopper sparrows set up territories in a 110-acre field restored to native prairie vegetation. This site was previously a soybean field. The restoration was completed via a North American Wetlands Conservation Act Grant in partnership with Ducks Unlimited.

Most new discoveries were welcome additions to the list of plant and animal species that use the refuge. However, five are nonindigenous invasives that compete with native species and degrade habitats. The emerald ash borer has colonized the refuge and its impacts on green ash and forest health are spreading rapidly. Two aquatic invaders, rusty crayfish and round goby, were found during a study of northern pike use of wetland impoundments. Only one crayfish was found, but several gobies were

captured, indicating they are here to stay. Two other aquatic nuisance species, zebra mussel and Asian clam, were found during the mussel survey.



*The round goby is an introduced aquatic nuisance species discovered in refuge waters in 2008.  
Steven F. Kahl/USFWS; 4/2008*

Altogether, 1,006 species of organisms have been identified on the refuge, including 27 fungi, 292 vascular plants, 311 invertebrate fauna, 47 fish, 10 amphibians, 10 reptiles, 280 birds, and 29 mammals. The complete list of additions includes:

pin oak - *Quercus palustris*  
predaceous diving beetle - *Dytiscidae*  
emerald ash borer - *Agrilus planipennis*  
mosquito - *Aedes abserratus*  
mosquito - *Aedes provocans*  
mosquito - *Aedes punctor*  
mosquito - *Orthopodomyia signifera*  
shaggy-legged gallinipper - *Psorophora ciliata*  
hickory hairstreak - *Satyrium caryaevorum*  
striped hairstreak - *Satyrium liparops*  
common ringlet - *Coenonympha tullia*

powdered dancer - *Argia moesta*  
green-striped grasshopper - *Chortophaga viridifasciata*  
straight-lanced meadow katydid - *Conocephalus strictus*  
mucket - *Actinonaias ligamentina*  
spike - *Elliptio dilatata*  
Wabash pigtoe - *Fusconaia flava*  
plain pocketbook - *Lampsilis cardium*  
fatmucket - *Lampsilis siliquoidea*  
fluted-shell - *Lasmigona costata*  
fragile papershell - *Leptodea fragilis*  
pondmussel - *Ligumia subrostrata*  
pink heelsplitter - *Potamilus alatus*  
pink papershell - *Potamilus ohensis*  
pimpleback - *Quadrula pustulosa*  
lilliput - *Toxolasma parvus*  
paper pondshell - *Utterbackia imbecillis*  
ellipse - *Venustaconcha ellipsiformis*  
rainbow - *Villosa iris*  
fingernail clam - *Sphaeriidae*  
Asian clam - *Corbicula fluminea*  
zebra mussel - *Dreissena polymorpha*  
rusty crayfish - *Orconectes rusticus*  
round goby - *Neogobius melanostomus*  
northern water snake – *Nerodia sipedon*  
black-bellied whistling-duck – *Dendrocygna autumnalis*  
northern saw-whet owl – *Aegolius acadicus*  
grasshopper sparrow – *Ammodramus savannarum*