Classifications and rationales from May-June 2011 COSSARO Meeting

Species Group	Common Name	Scientific Name	Previous Classification under the ESA	New Classification by COSSARO
Amphibians	Blanchard's Cricket Frog	*Acris blanchardi*	Endangered	Extirpated
Birds	Barn Swallow	*Hirundo rustica*	N/A	Threatened
Birds	Eastern Meadowlark	*Sturnella magna*	N/A	Threatened
Birds	Henslow's Sparrow	*Ammodramus henslowii*	Endangered	Endangered
Birds	King Rail	*Rallus elegans*	Endangered	Endangered
Fishes	Aurora Trout	*Salvelinus fontinalis timagamiensis*	Endangered	N/A (ineligible)
Fishes	Silver Shiner	*Notropis photogenis*	Special Concern	Threatened
Insects	Hine's Emerald	*Somatochlora hineana*	N/A	Endangered
Insects	Hungerford's Crawling Water Beetle	*Brychius hungerfordi*	N/A	Endangered
Insects	Pygmy Snaketail	*Ophiogomphus howei*	N/A	Endangered
Mussels	Hickorynut	*Obovaria olivaria*	N/A	Endangered
Mussels	Salamander Mussel	*Simpsonaias ambigua*	Endangered	Endangered
Vascular Plants	Dwarf Lake Iris	*Iris lacustris*	Threatened	Special Concern
Vascular Plants	Small Whorled Pogonia	*Isotria medeoloides*	Endangered	Endangered

Rationale for Conservation Status Classifications of Species

Blanchard's Cricket Frog is classified as **Extirpated** in Ontario.

Acris blanchardi is a small frog found from Minnesota and Wisconsin eastward through Illinois, Indiana, Michigan and Ohio south to Kentucky and West Virginia. *Acris blanchardi* is semi-aquatic and remains in, or close to, permanent water bodies. It is found in a wide variety of permanent water bodies including lakes, ponds, rivers and streams, especially in shallow water near shore where there is substantial vegetative cover. The species has declined throughout the northern portion of its range in the United States and shows no sign of recovery. This species was found in extreme southwest Ontario on Pelee Island and also on Point Pelee. Other records from Ontario are unconfirmed. There are 8 occurrences in the NHIC Element Occurrence database, all of which are either historic or extirpated. There are no confirmed observations of Blanchard's Cricket Frogs since the 1970's despite considerable search effort, and the species is considered Extirpated from Ontario.

Barn Swallow is classified as **Threatened** in Ontario.

Historically one of the world's most widespread passerine species, the Barn Swallow is a medium-sized songbird that is easily recognized by its deeply-forked tail. Similar to many other species of birds that specialize on a diet of flying insects, this species has experienced large declines that began somewhat inexplicably in the mid to late 1980s in North America. Although there have been losses in artificial nest sites (e.g., open barns) and in the amount of foraging habitat in open agricultural areas in some parts of Canada, these losses do not seem to account entirely for the size and timing of the declines in Barn Swallows. Similar declines are occurring in several other aerial insectivores that do not rely on artificial nest sites nor use agricultural fields to forage. These similar declines and the magnitude and geographic extent of the Barn Swallow's decline coupled with the lack of understanding of what is causing the declines indicate that this species should be classified as Threatened.

Eastern Meadowlark is classified as **Threatened** in Ontario.

This medium-sized songbird is a member of the blackbird family and is one of most recognizable of Ontario's grassland birds. A ground-nesting bird with a bright-yellow throat and belly, this species joins other grassland birds of North America in having experienced widespread declines over the past 50 years. Its breeding range extends from the Atlantic coast, through the Great Plains, south to Florida and Arizona, and through Mexico to northern South America and Cuba. Seventy percent of Canada's population breeds in southern Ontario; it is progressively less common in southern Québec, New Brunswick, and southern Nova Scotia. In Ontario, it is continuously distributed south of the Canadian Shield, and also nests in the Lake Nipissing area, the Clay Belt, and the Rainy River area. Although still relatively common in Ontario, it has been declining here, as it has throughout its North American range, since the 1960s. This is mostly

likely due to loss of grassland habitat on both the breeding and wintering grounds, coupled with reduced reproductive success resulting from early haying. Long-term monitoring data from a number of sources indicates population declines exceeding 70% across North America and in Ontario. Eastern Meadowlark is classified as Threatened in Ontario due to declining populations and on-going threats of habitat loss and degradation.

Henslow's Sparrow is classified as **Endangered** in Ontario.

The Henslow's Sparrow formerly occurred in scattered locations in extensive grasslands with moist depressions throughout the Mixedwood Plains Ecozone in southern Ontario, but it now occurs only sporadically in the province. It is found during migration almost every year, but breeding or even territorial records are exceedingly rare, and birds are rarely found during the breeding season in a given location for more than one year in row. It has also bred in southwestern Quebec, but its main range is in the Midwestern U.S. states, from Minnesota and New York south to Oklahoma and Tennessee during the breeding season, and the southeastern states in winter. It is one of the fastest declining songbirds in North America, although small increases have been noted on retired agricultural lands and reclaimed surface mines in Ohio and Pennsylvania. The major threats to this species relate to the loss of extensive grasslands and pasture lands, through urbanization, conversion to more intensive agricultural practices, succession of pastures to shrublands and forests, and perhaps also to drainage of moist areas within existing grasslands and pastures. Early hay cutting also can be detrimental to productivity of this sparrow. The Henslow's Sparrow is Endangered in Ontario because of the severe declines in populations that has occurred, as well as continuing threats to its habitat.

King Rail is classified as **Endangered** in Ontario.

The King Rail (*Rallus elegans*) is a large rail species that breeds in marsh wetland complexes in parts of eastern North America, particularly the southeast. In Canada and Ontario, it occurs only in southern Ontario, primarily in the Lake St. Clair-Walpole Island area but also elsewhere including some recently documented occurrences in the Prince Edward County area. Although ranked as G4 globally, it has declined in every Canadian and U.S. jurisdiction except for Florida, and is considered critically imperiled in many U.S. states north of the Gulf coast. Population trends are difficult to determine for Ontario, given the species' limited distribution and secretive habits; it was actually found in more 10 x 10 km atlas squares during the second Ontario Breeding Bird Atlas than during the first, but this is likely due primarily to an increased targeted effort to monitor this species. Wetland loss appears to be the primary driver for this species' declining status, although other human threats include collisions with mad-made structures, invasive plant species, and possibly declining crayfish populations and West Nile Virus. The future of this species is closely tied to the future of wetlands, particularly freshwater marshes. There is limited rescue potential, given the species' declining status, especially in immediately adjacent jurisdictions. The long-term decline, Ontario rarity, declining status in many adjacent

jurisdictions and relative rarity of marsh habitats support a continued designation of Endangered for this species.

Aurora Trout is **not eligible for assessment** in Ontario

Aurora Trout is a recognizable colour variant of the Brook Trout that only occurs in two small lakes in northeastern Ontario. Formerly, it was recognized as a subspecies and was classified as Endangered in Ontario. It became extinct in the wild as a result of acid precipitation of the lakes where it occurred. The lakes were limed to increase the pH and Aurora Trout was successfully reintroduced from hatchery stock. The wild population is estimated at 2000 to 3600. Recent genetic studies indicate that there is a lack of genetic or ecological distinctness to separate it from the common form of Brook Trout. Consequently Aurora Trout is no longer considered eligible to be designated as a species of risk.

Silver Shiner is classified as **Threatened** in Ontario.

Found in only three watersheds in southwestern Ontario, the Silver Shiner is a slender and silvery minnow with large eyes. It most commonly occurs in mainstem and larger tributaries, and rarely in small streams or rivers. It is susceptible to continuing habitat loss and degradation in one of the most industrialized areas in Canada, which is under ever-increasing development pressures. Although it is difficult to determine whether declines have occurred, there is some evidence of declines elsewhere in its range, and extirpation from watersheds. The small number of populations and the relatively high degree of threat merits a Threatened status in Ontario.

Hine's Emerald is classified as **Endangered** in Ontario.

Hine's Emerald is a medium-sized dragonfly with bright green eyes, a metallic green thorax with two lateral yellow stripes, and a blackish-brown abdomen. It inhabits calcareous, groundwater-fed wetlands, usually over dolomite bedrock. Larvae live for 3 to 5 years and use crayfish burrows during periods of low water and during the winter. Hine's Emerald is a globally rare species confined to Ontario, Wisconsin, Michigan, and Illinois. It formerly occurred in Ohio, Indiana, and Alabama. In Ontario, it is found in an area covering about 28 km^2 in the Minesing Wetlands, west of Lake Simcoe. The species was recently discovered in Ontario in 2007 and population size and trends are unknown. Habitat quality is predicted to decline with proposed housing development that could alter the groundwater volume and quality in the wetland. Invasive Common Reed is another potential threat. The species is designated as Endangered in Ontario given its global rarity, single occurrence, and potential threats to habitat.

Hungerford's Crawling Water Beetle is classified as **Endangered** in Ontario.

Hungerford's Crawling Water Beetle is a small beetle found in small to medium-sized streams with high quality, fast-flowing water, often immediately downstream from beaver dams, hydro-electric dams and culverts. It is a globally rare glacial relict that is endemic to the Great Lakes

region. Its range is restricted to only 3 rivers in Bruce County, Ontario and 5 in northern Michigan, with limited potential for additional populations to be found. There is limited information on population trends, although it appears that it may have been extirpated from one of the 3 rivers in which it occurred in Ontario. Threats are not fully understood, but primary threats are believed to be hydrological changes, predation by introduced fish species and degraded water quality. The species' globally restricted range, limited number of occurrences and high conservation responsibility for Ontario, and continued threats to the aquatic environment support a designation of Endangered for this species.

Pygmy Snaketail is classified as **Endangered** in Ontario.

This dragonfly is black with vivid yellow markings on the abdomen and bright green on the thorax. It is distinguished from other snaketails by its small size and orange-brown markings on the base of the wings. The larvae inhabit gravel beds in large, cold, clean rivers. Adults are rarely seen because they spend much of their time in the forest canopy. The species range is apparently disjunct, with midwestern populations in Wisconsin, Minnesota, and northwestern Ontario and more extensive eastern populations ranging along the Appalachian Mountains from Tennessee to New Brunswick. Pygmy Snaketail is known in Ontario from only a single exuvia (larval skin) collected in northwestern Ontario in 2007. No further Ontario specimens have been found despite searches in subsequent years. It seems to be rare and restricted to high-quality habitat throughout its range. Larvae are susceptible to water pollution, sedimentation, and habitat alteration caused by dams.

Hickorynut is classified as **Endangered** in Ontario.

Hickorynut is a freshwater mussel currently occurring in two Ontario rivers, the Ottawa and the Mississagi. It formerly occurred in a number of other Ontario rivers (Thames, Detroit, Grand, Niagara), but there are no records from any of these rivers in more than a decade. Elsewhere in North America the species occurs in southern Quebec and 19 primarily Midwestern U.S. states, south to Louisiana. Hickorynuts are declining throughout much of their range and are extirpated from at least five states. Declines and extirpations are due mainly to invasive dreissenid mussels, but poor water quality due to industrial and agricultural pollution and declines of its host fish, Lake Sturgeon, are also implicated.

Salamander Mussel is classified as **Endangered** in Ontario.

The Salamander Mussel is a highly specialized unionid mussel that utilizes the Mudpuppy as its glochidial host, unlike all other North American unionids, which use various fish species as hosts. It is found in silty or sandy substrates of freshwater rivers, usually under large rocks, where there is a swift current. It occurs in the Midwestern U.S.A. from the Lakes Huron, St. Clair, and Erie south in the Ohio, Cumberland, and Mississippi River systems to Arkansas, and formerly, Tennessee. In Ontario, it now occurs only in a few locations along a 50 km stretch of the

Sydenham River. Populations in previously known locations, for example, in the Thames and Detroit Rivers, appear to have become extirpated. The primary threats to this species include threats to the glochidial host, and are primarily related to inputs to the river from agricultural uses (fertilizers, pesticides, silt). Given the decline in the numbers of locations of this species, as well as the threats to its habitat and glochidial host along this river, the Salamander Mussel is considered to be Endangered in Ontario.

Dwarf Lake Iris is classified as **Special Concern** in Ontario.

The Dwarf Lake Iris is a small perennial that is endemic to the Great Lakes basin, restricted to the northern shorelines of Lakes Huron and Superior. It is ranked as G3 globally, and as S3 in all 3 jurisdictions where it occurs (Ontario, Michigan, Wisconsin). There is little indication of a broad decline globally, although Ontario's population appears to have declined. Ontario represents approximately 30% of the global species' distribution and 23% of its global population. Human threats include shoreline development, road clearing and use of heavy machinery. Partial clearing of natural forest may enhance habitat in some cases by creating canopy gaps and removing the litter layer. The species has a specialized life history that restricts it to moist habitats (e.g. alvars, bedrock shorelines, sand or gravel beach ridges, calcareous soils in forest openings) within a few km of great lakes shorelines. Although the global rarity of this species and the significant portion of its global range in Ontario suggest a higher designation, the Dwarf Lake Iris is designated as Special Concern in Ontario due to several newly discovered populations, the lack of significant population decline, limited direct threats, and the fact that documented declines have been focused primarily on smaller, more fragmented populations.

Small Whorled Pogonia is classified as **Endangered** in Ontario.

This is a small, perennial small orchid with a single whorl of leaves near the top of the stem beneath the flower. It grows in the duff layer of mesic woodland on acid substrate. It occurs in eastern North America and is rare throughout its range. It is known in Canada and Ontario from only from a single site in Elgin County. It has not been seen since 1998 despite regular monitoring, but is known to have dormant periods of several years and may still be extant. Threats include trampling and exotic earthworms. Because of its global rarity and single population in Ontario with continued threats, and no recent records this species is classified as Endangered.