Twin Lakes
&
Pioneer Marsh

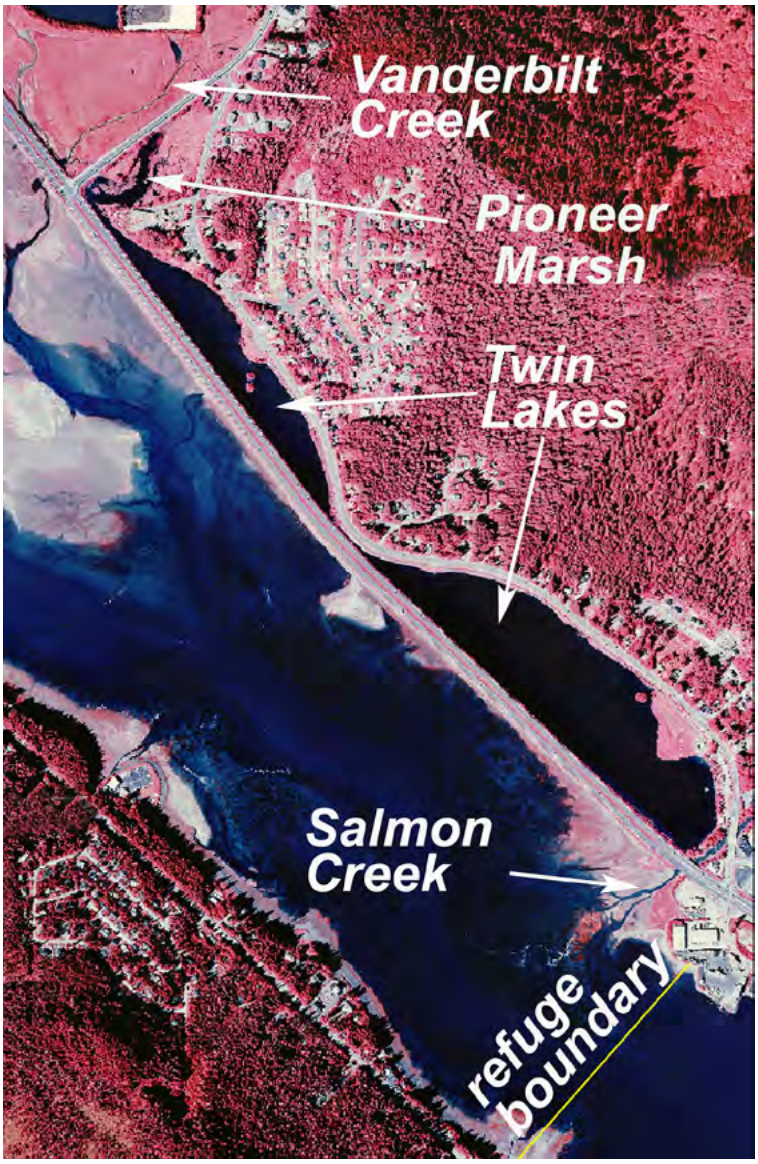
My goal in producing this document is to share this information with the Pioneer Home. The easy to walk paved trail, occasional benches, beauty of the area, and wildlife to be seen make this a wonderful area for the residents of the home to explore.

Twin Lakes and Pioneer Marsh were created in 1975 when Egan Expressway cut off a portion of the Mendenhall Wetlands. Since then aquatic vegetation adapted for freshwater/low salinity conditions has become established. This has created good habitat for aquatic insects and fish which in turn provide food for several species of birds and river otters.

As a result this has become one of the best places in Juneau to see certain species of birds. Even some species considered rare to very rare in the Juneau area, such as American Coot, Hooded Merganser, Sora, and Red-winged Blackbird can usually be seen in Twin Lakes or Pioneer Marsh on a regular basis.

The viewing of these birds and others is enhanced by a 1-mile paved walking trail and benches along Twin Lakes and an observation bench at Pioneer Marsh. Enough vegetation has grown in between the trail and water so wildlife feels reasonably comfortable feeding near people.

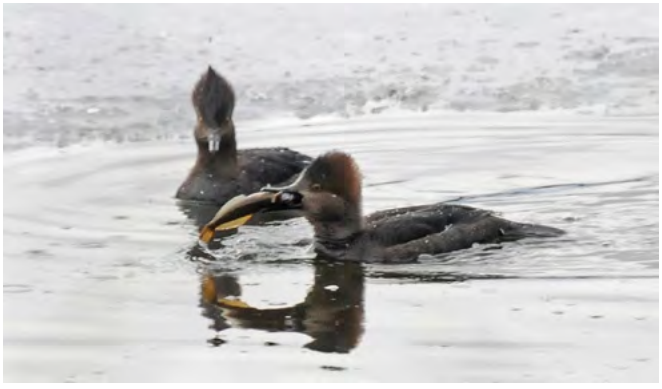
In the following pages I will show photographs of birds, river otters and beaver taken in this area. Many of the photos will show what the creatures are feeding on and I will discuss what attracts them to this area.



Staghorn Sculpins (above) and Three-spine Sticklebacks (below) are a major food of several birds and otters in the area.

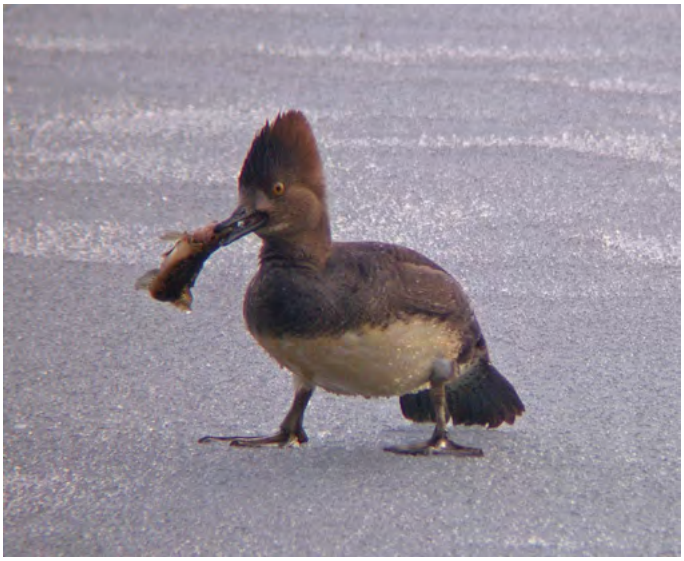
American Coot (above right) and **American Wigeon** (left and below) both feed mostly on aquatic plants and algae and some grasses during the non-breeding season (the time when they are in the area). Both species are known to eat watermilfoil, the most common plant in Twin Lakes.

Gadwalls, a bird considered rare to uncommon in the Juneau area, can often be seen at Pioneer Marsh. Their diet consists of the leafy portions of aquatic vegetation and seeds later on.They are also known to feed on the most abundant plant in Twin Lakes, watermilfoil.



Hooded Mergansers often rest and feed in the area.

Twin Lakes and Pioneer Marsh are the best places in Juneau to see these beautiful **Hooded Mergansers.** Here they feed heavily on Staghorn Sculpins (lower left) and Three-spine Sticklebacks (lower right).



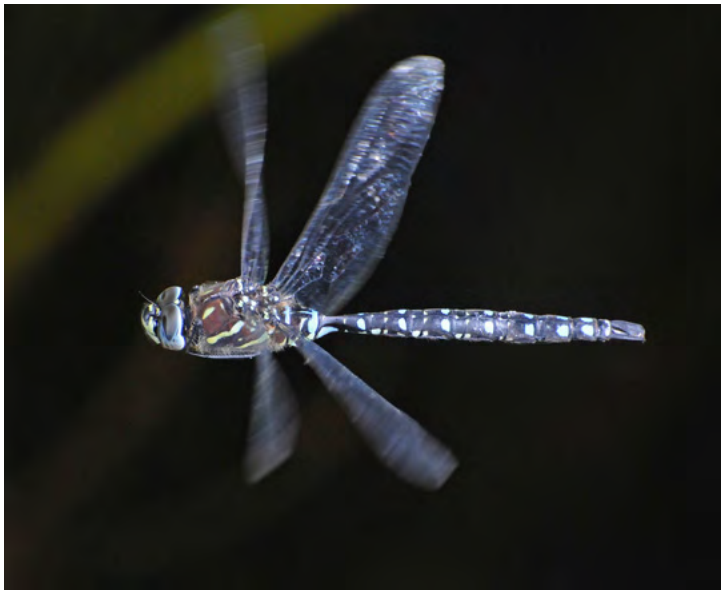
Pioneer Marsh could be considered a sanctuary for **Mallards** during the hunting season on the Mendenhall Wetlands. I have often counted over 100 resting on the ice or in amongst the heavy vegetation. The marsh also provides a place for several females to raise their young.

Mallards are considered to be omnivorous and opportunistic, a generalist feeder. During breeding season, they eat mostly animal foods, including insects such as midge larvae and other Diptera, dragonflies, and caddisfly larvae, aquatic invertebrates such as snails and freshwater shrimp, and terrestria earthworms. Outside of breeding season, they may eat mostly seeds from plants and aquatic vegetation.

One of the most fascinating insects living in Twin Lakes and Pioneer Marsh are the larvae of caddisflies. Most of their larva build cases out of material they find nearby such as pieces of bark (upper photo) or bits of vegetation (left photo).

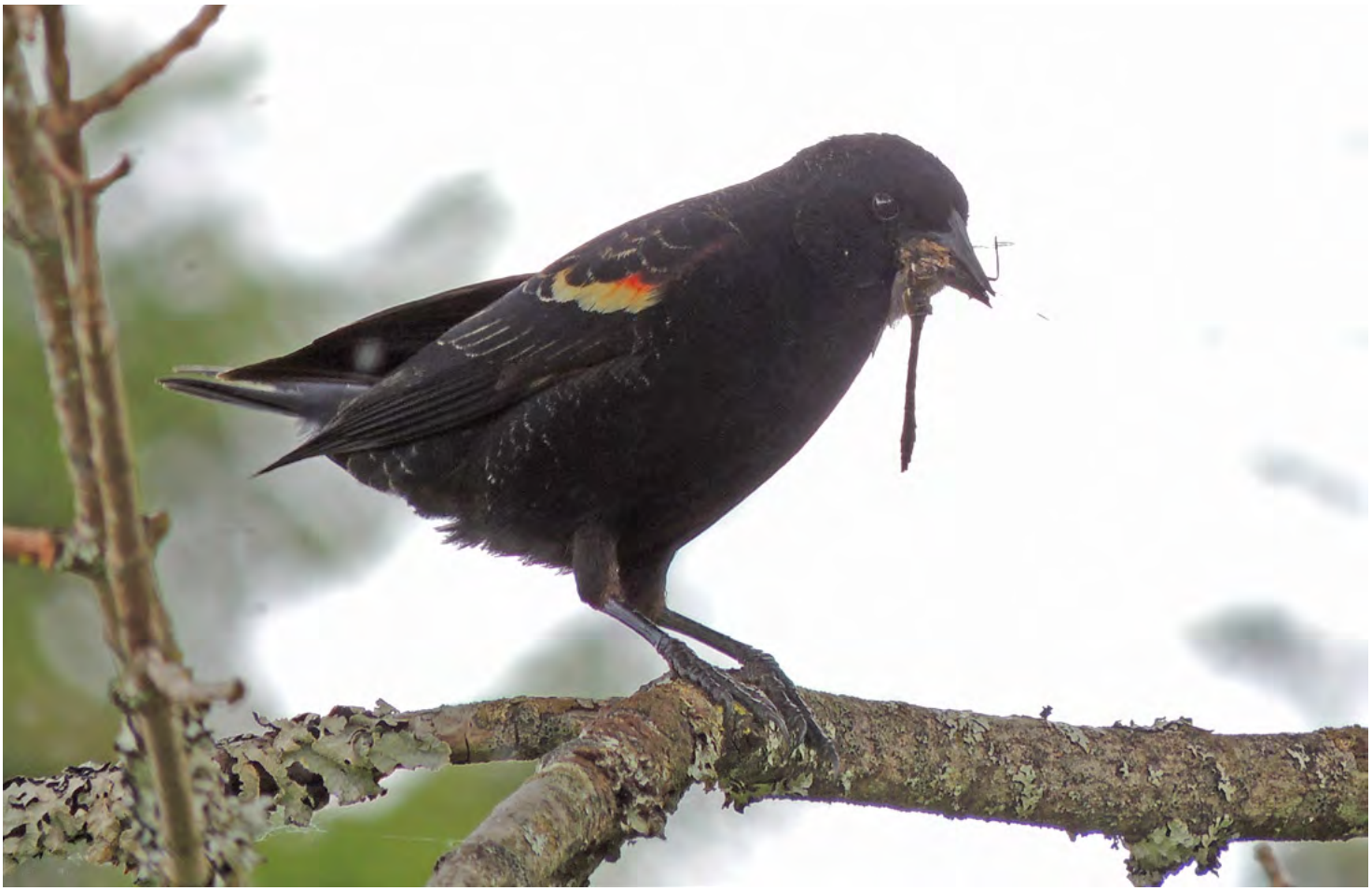
In these caddisflies the vulnerable abdomen is safely concealed inside these cases which have a rigid base. These cases are constructed piece by piece using silk that the caddisfly larva exudes from its mouth.

These caddisflies are slow moving and easy to catch by insect eating birds. However, the bird must figure out how to get the insect out of its case. Some birds do this by grabbing the insect by its head and vigorously shaking it until the case fall off.

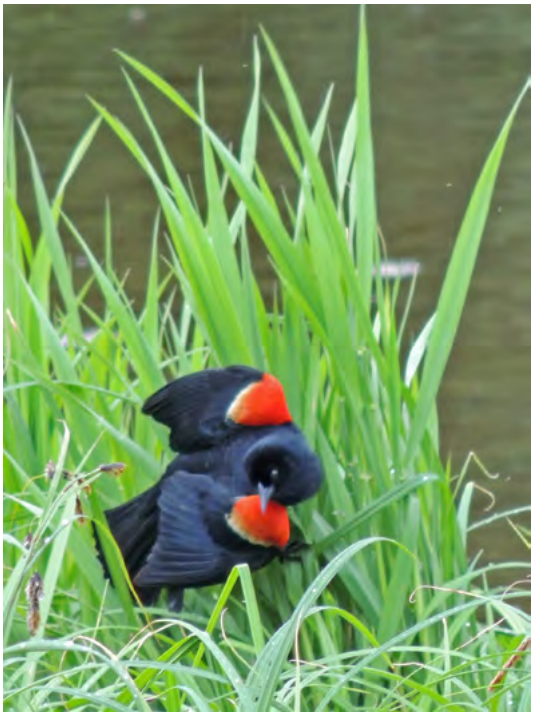


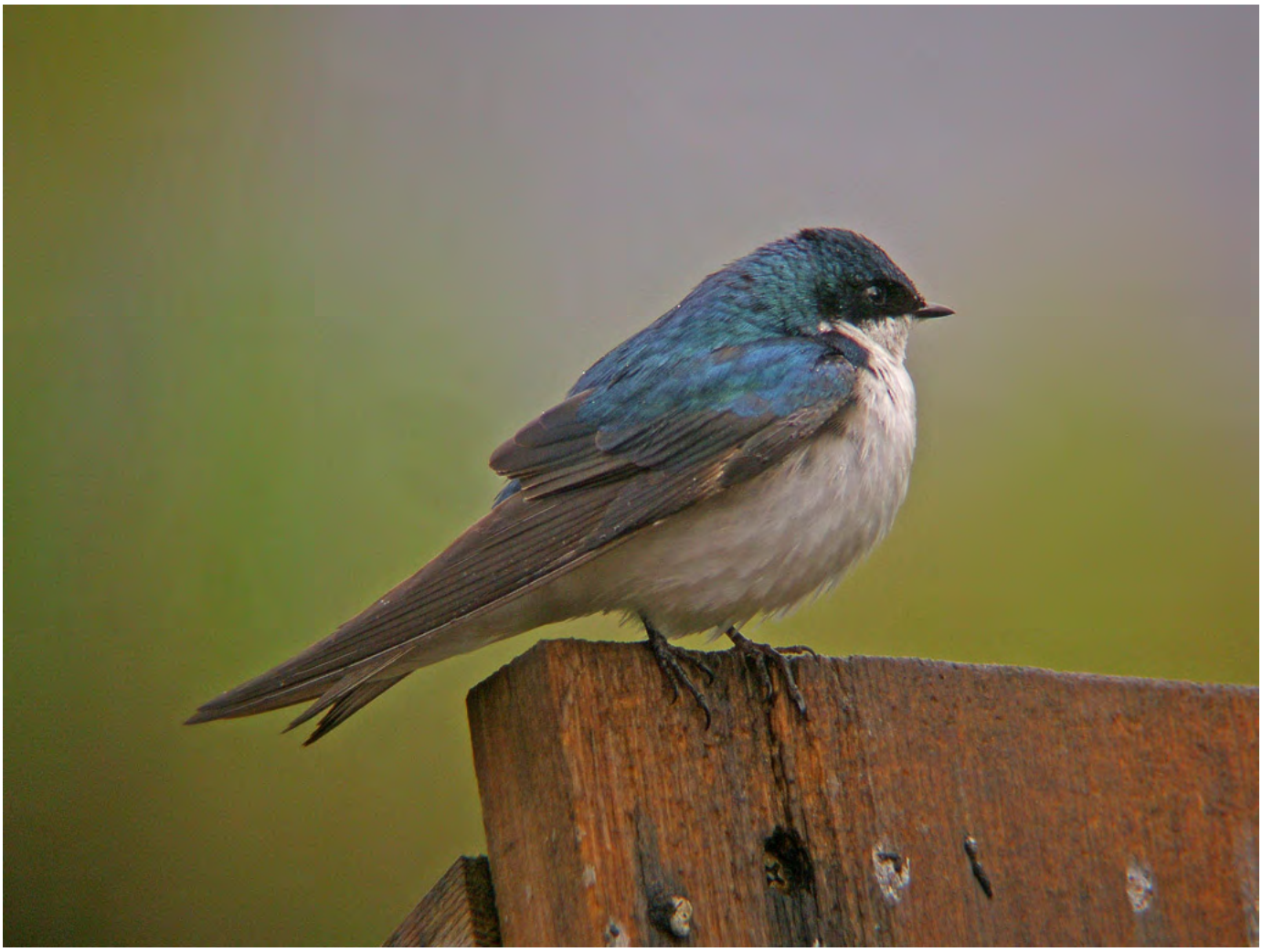
Other neat insects living in the lakes and marsh are dragonflies. As larva in the water (upper photo) they capture other insects and even small fish. They can thrust their lower jaw forward at lightning speed to seize prey with their sharp pincers.

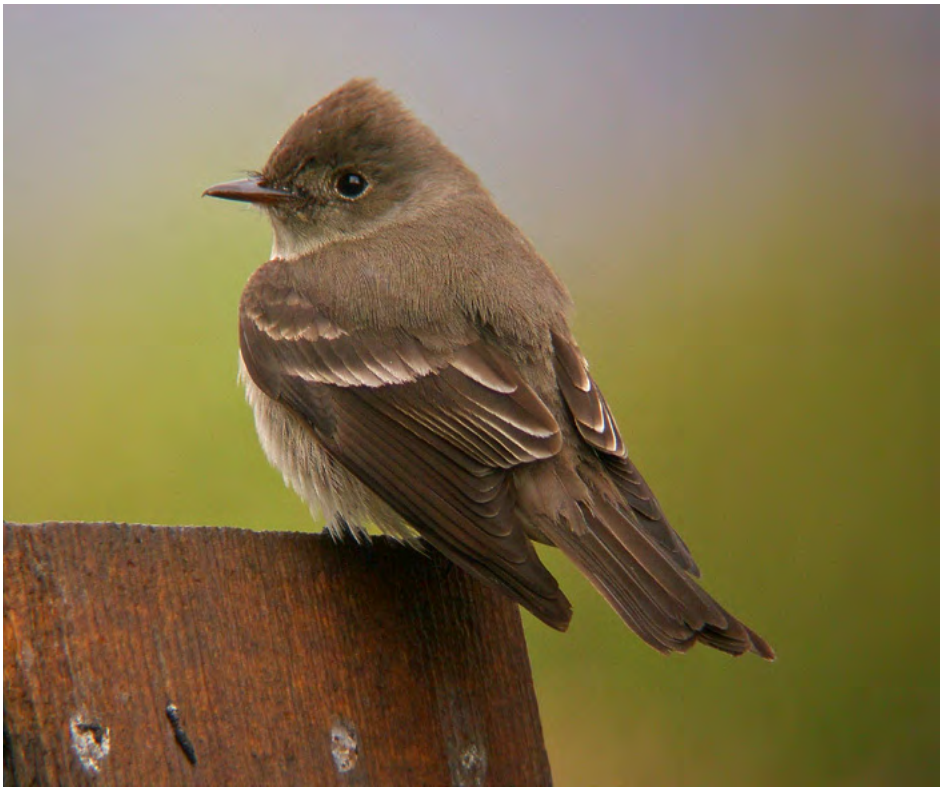
The adult dragonfly (left photo) uses its powerful flying abilit , excellent vision, and spine-covered legs to capture insects in mid-air or resting on the leaves of plants. They can capture and eat up to 300 insects a day. That includes insects that bite us such as mosquitoes. Pioneer Marsh is a great place to watch adult dragonflies hunt their prey.



One bird that nests in Pioneer Marsh, the **Red-winged Blackbird,** specializes in capturing and eating adult dragonflies. It is fun to listen for the loud, liquid, ringing *ok-a-lee* song of the male as it displays and sings to declare its territory and attract a mate (lower left). When a predator enters the marsh both crows (also nesters) and blackbirds will try to drive it away (lower right).

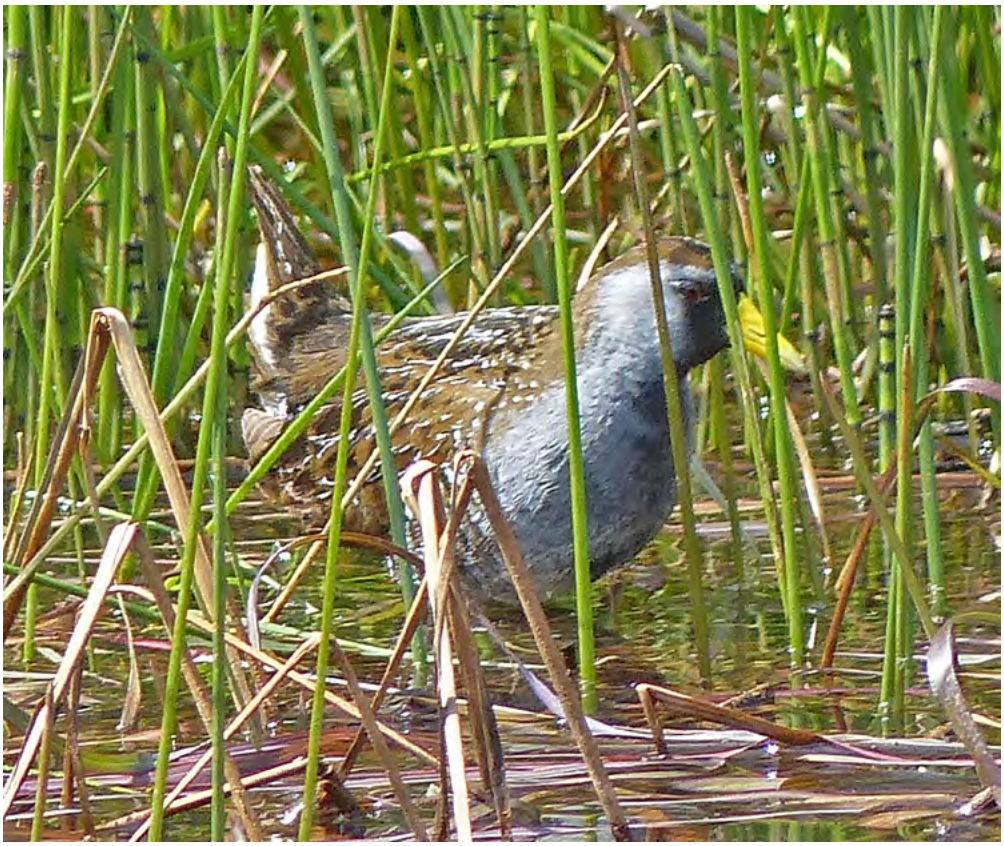






Some birds such as the **Tree Swallow** and **Western Wood-Pewee** make their living at catching flying insects. Both of these species are usually common around Pioneer Marsh which has a few nest boxes that the swallows use.

The insects eaten by these birds probably includes mosquitoes and midges which sometimes emerge from the water in large numbers.



One bird that really excites bird watchers at Pioneer Marsh is the **Sora**. This is a very rare bird in Alaska but in recent years it has occurred regularly in Pioneer Marsh. It is a difficult bird to see but can be recognized by its call with a rising whistled *ner-wee?* followed by a desending series of whistled notes, suggesting a whinny: *kweee-wi-wi-wi ...*

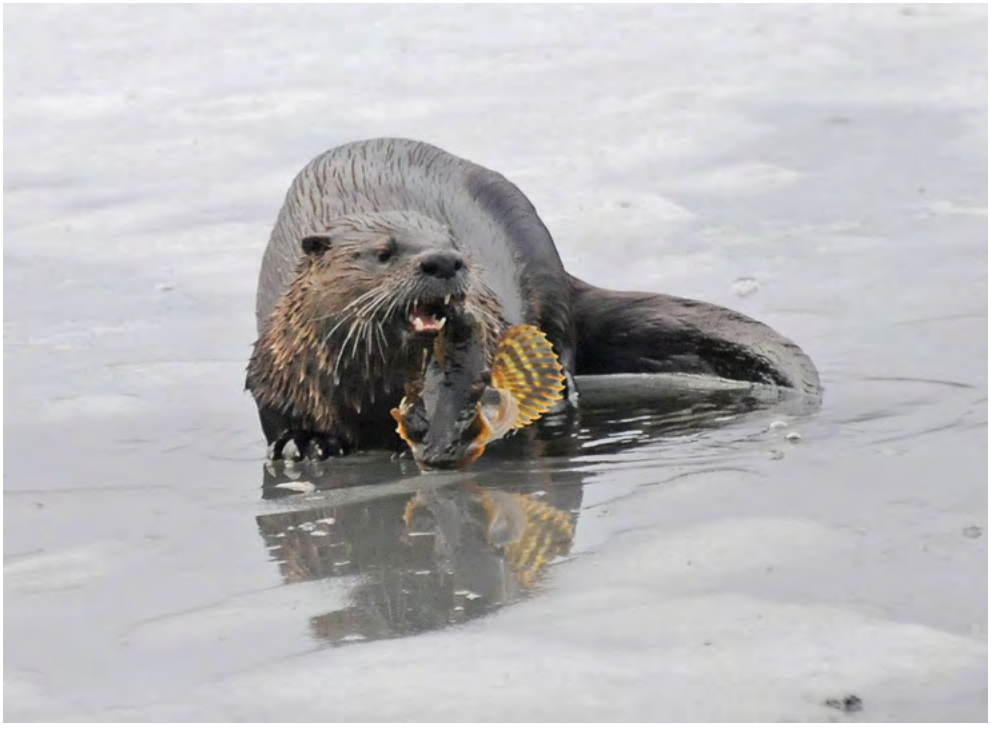
It appears that these birds are now nesting in the marsh. Here they probably feed mostly on both plant and aquatic insects. Seeds are a predominant food, especially in late summer and fall.

Several species of waterfowl stop to rest and feed on Twin Lakes during migration between their more northerly nesting grounds and wintering areas further south. Depicted in these two photos are a family of **Tundra Swans** that I watched at the lakes last year. They seemed quite comfortable with the rushing traffic on Egan Expressway nearb .

It's always good to check the lakes during the spring and fall migration periods. The species using the lakes can change from day to day.

To watch a video on Trumpeter Swans feeding and preening in Twin Lakes look at
http://www.naturebob.com/trumpeter-swans-feeding-twin-lakes and
http://www.naturebob.com/trumpeter-swans-preening-twin-lakes

One bird that is fun to watch at Pioneer Marsh is the **Great Blue Heron**. They are primarily fish eaters and they very patiently and slowly stalk their prey within the marsh vegetation. One fish they commonly go after is the Three-spine Stickleback which prefers heavily vegetated areas and no doubt flourishes in the marsh.



To watch a video of otters feeding at Twin Lakes look at
http://www.naturebob.com/river-otter-feeding-twin-lakes

River Otters are one mammal that you can often see at Twin Lakes. Here they look for Staghorn Sculpins which can be fairly abundant in the brackish water of the lakes. They also eat Three-spine Sticklebacks.

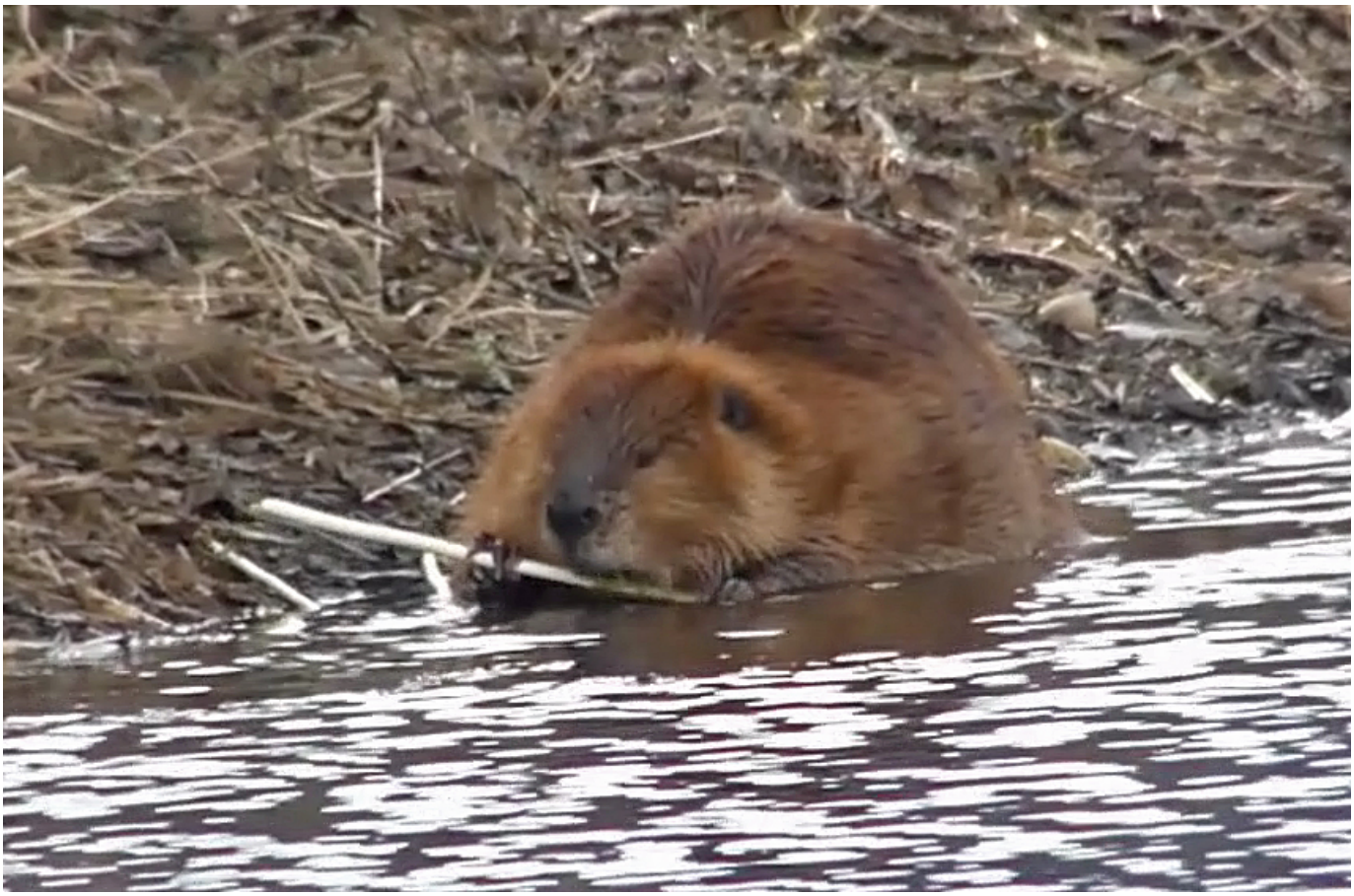
It is wonderful to see the excitement on people's faces when they see these otters playing and eating on the frozen lake surface. In my opinion, this area is one of the best places to watch otters in the Juneau area.

Beavers moved into Twin Lakes in 2017. They built their lodge close to a sitting bench just off the walking path. There is a lot of food available for them along the shore and on the island.

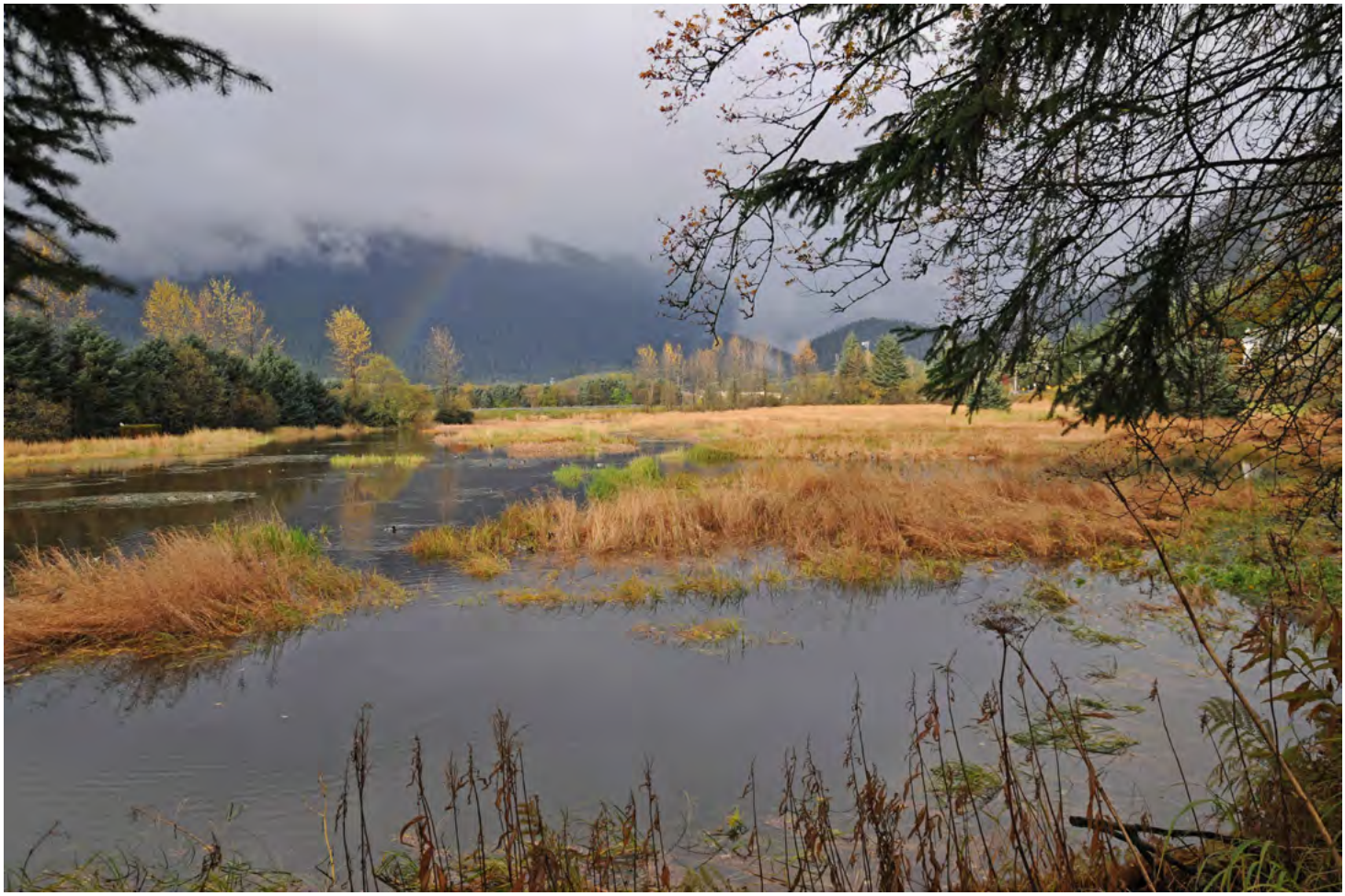
The photo below shows one eating the bark off an alder branch on the island in April 2018.

They appeared to be quite used to all the human activity and automobile traffic in the area and often were out and about throughout the day. This created a wonderful opportunity for people to watch them up close.

To watch a video of this beaver at Twin Lakes look at https://vimeo.com/264711939



Threats to Twin Lakes and Pioneer Marsh



Two of the biggest threats to the value of Twin Lakes and Pioneer Marsh for wildlife are a proposed trail around the marsh and the draining of Twin Lakes to subdue the vegetation.

A trail around Pioneer Marsh would cause most of the nesting and feeding birds to vacate the area. At present the marsh is only easily accessable to humans on one short side. Opening up the rest to human access would disturb the birds too much.

The periodic draining of Twin Lakes and Pioneer Marsh no doubt destroys a large percentage of the resident sculpins and stickleback. Most of the aquatic insects would be eliminated and the time for them to return to normal abundance may be several years.

The most abundant vegetation in Twin Lakes is not an invasive plant. It is Northern Watermilfoil (*Myriophyllum exalbescens*). Leaves and fruit of northern milfoil are consumed by a variety of waterfowl. Beds of northern milfoil offer shade, shelter and foraging opportunities for fish and aquatic insects

For More Information

Most of the information on the feeding habits of the birds was extracted from the Birds of North America Online reports. Usually these reports are written by experts on the species and are well researched with numerous references.

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