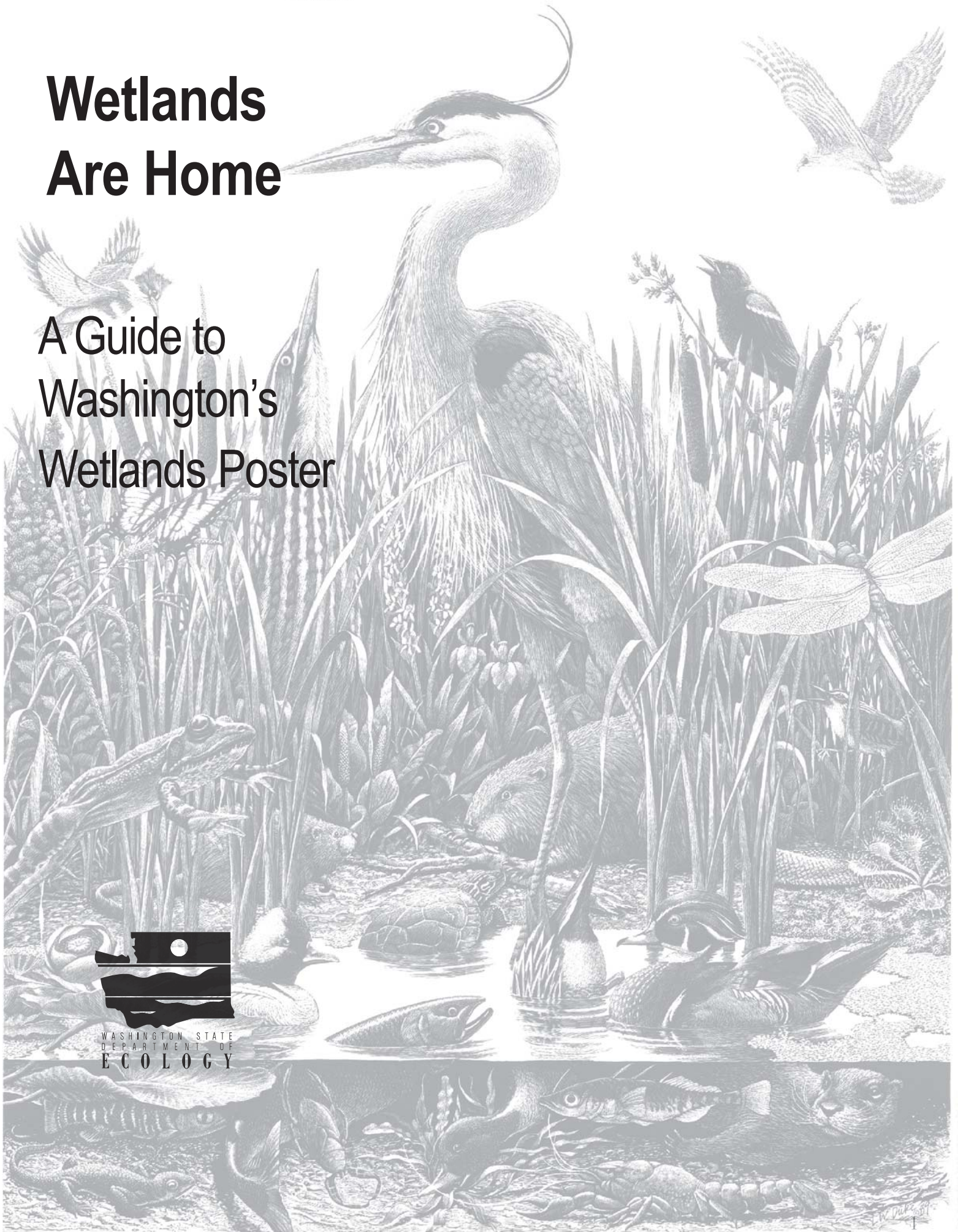


Wetlands Are Home

A Guide to
Washington's
Wetlands Poster



Wetlands Are Home: A Guide to Washington's Wetlands Poster

This guide is meant to accompany the Washington State Department of Ecology's 36" x 24" Wetlands posters. The poster is one of a series illustrated by nature artist Larry Duke.

Posters are available to the general public through nonprofit organizations. For a list of distributors, visit the Department of Ecology's World Wide Web page at <http://www.ecy.wa.gov/biblio/94151.html> or call Ecology's Publication's Office at (360) 407-7472 and ask for Publication No. 47-151.

Public school teachers can order copies of the poster for classroom use from the Superintendent of Public Instruction's Office of Environmental Education, at (206) 365-3893.

If you would like multiple copies of this booklet, please feel free to make copies. You can download a master copy for printing from Ecology's web site at <http://www.ecy.wa.gov/biblio/0306033.html> For additional single copies, call Ecology at (360) 407-7472.

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Padilla Bay

National Estuarine Research Reserve



Wetlands

Wetlands have recently become a buzzword on the news and in papers when discussing environmental issues. But with all this discussion, nobody seems to be making it very clear what wetlands truly are. A wetland is pretty simple: it is *wet land*! The term wetland is a general name given to a variety of different habitats that cover 6% of the earth's surface. Some of the names are familiar: marsh, bottomland, slough, bog, peatland, wet meadow, swamp, or salt marsh and some are pretty strange: playas, pocosins, flark and fen, salt pans, estuaries, mires, muskegs, moors, potholes, and Carolina Bays.

Aside from the variety of names, wetlands are basically areas where water covers the soil or is present at or near the ground surface for part or all of the year. Often times specially adapted plants and animals are used as indicators to define a wetland.

In the past, wetlands were

misunderstood. They were thought to be unimportant swampy, smelly, bug-infested wastelands. Bogs and swamps were deemed the home of monsters and disease. By the early 1970s over 450,000 acres of wetlands were lost each year to development and the hope of decreasing the mosquito population and controlling disease. The consequences were more destructive than just the loss of wetland habitat. Floods damaged the reclaimed areas and nearby uplands. Reptiles and amphibians that naturally preyed upon the mosquitoes became threatened by the loss of habitat and food sources. We are still losing over 58,000 acres of wetlands nationally every year to make way for farmland, highways, houses, and development of commercial sites.

Today, scientific knowledge helps us understand that wetland functions are more valuable than previously thought. Their value is not associated with goods or

services as are most "valued" items in our society. Our *wet lands* act as natural environmental filters of pollution and help create a biological balance. They aid in climate stabilization, protect shorelines, recharge ground water aquifers, reduce flooding and droughts, provide erosion control, and maintain water stabilization and purification. They are home to 1/3 of North America's threatened and endangered species. Wetlands are essential as a home and rearing ground for salmon, bear, waterfowl and a rich array of other plants and animals. Aside from all these environmental benefits, wetlands are great places for us to enjoy outdoor recreation, education and research.

Wetlands must be protected! They are beautiful, diverse habitats that are highly productive, performing vital functions for healthy watersheds. The services that wetlands provide cannot be instantly or inexpensively replaced. We have been responsible for their decline, and now we must take action for their survival, restoration, and preservation. We need the services of healthy wetlands.

To learn more...

If you are interested in learning about these wonderful places, check out your local library or bookstore for information. There are many excellent books about wetland life. The internet is also a helpful source of information to get you started.

Photo: Padilla Bay Salt Marsh



Species List

1. Great Blue Heron – *Ardea herodias*
2. Belted Kingfisher – *Ceryle alcyon*
3. Northern Harrier – *Circus cyaneus*
4. American Bittern – *Bataurus lentiginosus*
5. Redwing Blackbird – *Agelaius phoeniceus*
6. Marsh Wren – *Cistothorus palustris*
7. Bufflehead – *Bucephala albeola*
8. Northern Pintail – *Anas acuta*
9. Wood Duck – *Aix sponsa*
10. Western Tiger Swallowtail butterfly – *Papilio rutulus*
11. Common Green Darner – *Anax junius*
12. Toe-biter beetle – *Abedus indentatus*
13. Signal Crayfish – *Pacifastacus leniusculus*
14. Northern Red-legged Frog – *Rana aurora aurora*
15. Painted Turtle – *Chrysemys picta picta*
16. Rough-skinned Newt – *Taricha granulosa granulosa*
17. Muskrat - *Ondatra zibethicus*
18. Beaver – *Castor canadensis*
19. River Otter – *Lutra canadensis*
20. Olympic Mudminnow - *Normbra hubbsi*
21. Coho Salmon – *Oncorhynchus kisutch*
22. Three-spined Stickleback – *Gasterosteus aculeatus*
23. Common Cattail – *Typha latifolia*
24. Rush – *Juncus sp.*
25. Hardhack – *Spiraea douglasii*
26. Sedge – *Carex sp.*
27. White Bog Orchid – *Platanthera dilatata*
28. Yellow Iris – *Iris pseudacorus*
29. Skunk Cabbage – *Lysichiton americanum*
30. Round-leaf Sundew - *Drosera rotundifolia*
31. Yellow Pond-lily – *Nuphar luteum ssp. polysepalum*
32. Small Duckweed – *Lemna minor*
33. Pondweed – *Potamogeton sp.*



1. Great Blue Heron – *Ardea herodias*

This is the largest of the heron family. It can be found motionless along the edge of a pond or marshy pool seeking out frogs or fish, which are its favorite foods! The great blue heron is a long-legged wading bird that appears almost prehistoric when awkwardly flying through the air.



2. Belted Kingfisher – *Ceryle alcyon*

As the name implies, these birds dine primarily on fish. They expertly plunge headfirst into sheltered waters. Belted Kingfishers are one of few North American bird species whose females are more colorful than males. The females have a chestnut band across the belly that is absent in male's blue-gray and white coloration.



3. Northern Harrier – *Circus cyaneus*

Formally known as the marsh hawk, the Northern Harrier is the only North American hawk to have evolved a facial disk similar to an owl. Even a beginning birder can identify this bird as it flies by exposing its white rump patch. This beauty can be seen “wobbly” flying over grasslands, fields, or marshes with its wings in a V-shape when hunting. Following a sudden and unexpected pounce, it captures small birds and mammals with its long yellow legs.



4. American Bittern – *Bataurus lentiginosus*

Frequently called a “thunder-pumper” or “stake-driver” the bittern is known for being heard before it is seen. Secretively, it freezes and when approached, raises its head and points its beak skyward swaying slowly from side to side, as if imitating waving reeds.



5. Redwing Blackbird – *Agelaius phoeniceus*

You might be able to see this species in just about every environment that is wet or brush-like. They are defensive and territorial in the spring, and are known to attack crows, ravens, magpies and raptors. You may even see them riding on the backs of crows, pecking them with fury. In the winter they flock together with other blackbirds in farmland or suburban areas.



6. Marsh Wren – *Cistothorus palustris*

This small wren is found in tall reeds, cattails or other similar marsh vegetation. It is very sneaky and often difficult to locate even though its singing can often be heard. The marsh wren eats mostly insects and sometimes snails. It nests in low ground cover during the breeding season, so watch where you step!



7. Bufflehead – *Bucephala albeola*

The tiny and compact bufflehead is the smallest duck. It has an unusually large puffy head that bears a white marking resembling a “shawl”. It can be spotted diving for small mollusks, crustaceans, and fish. This “tree nester” establishes a long-term mate and builds a nest in cavities excavated by the Northern Flicker (woodpecker).



8. Northern Pintail – *Anas acuta*

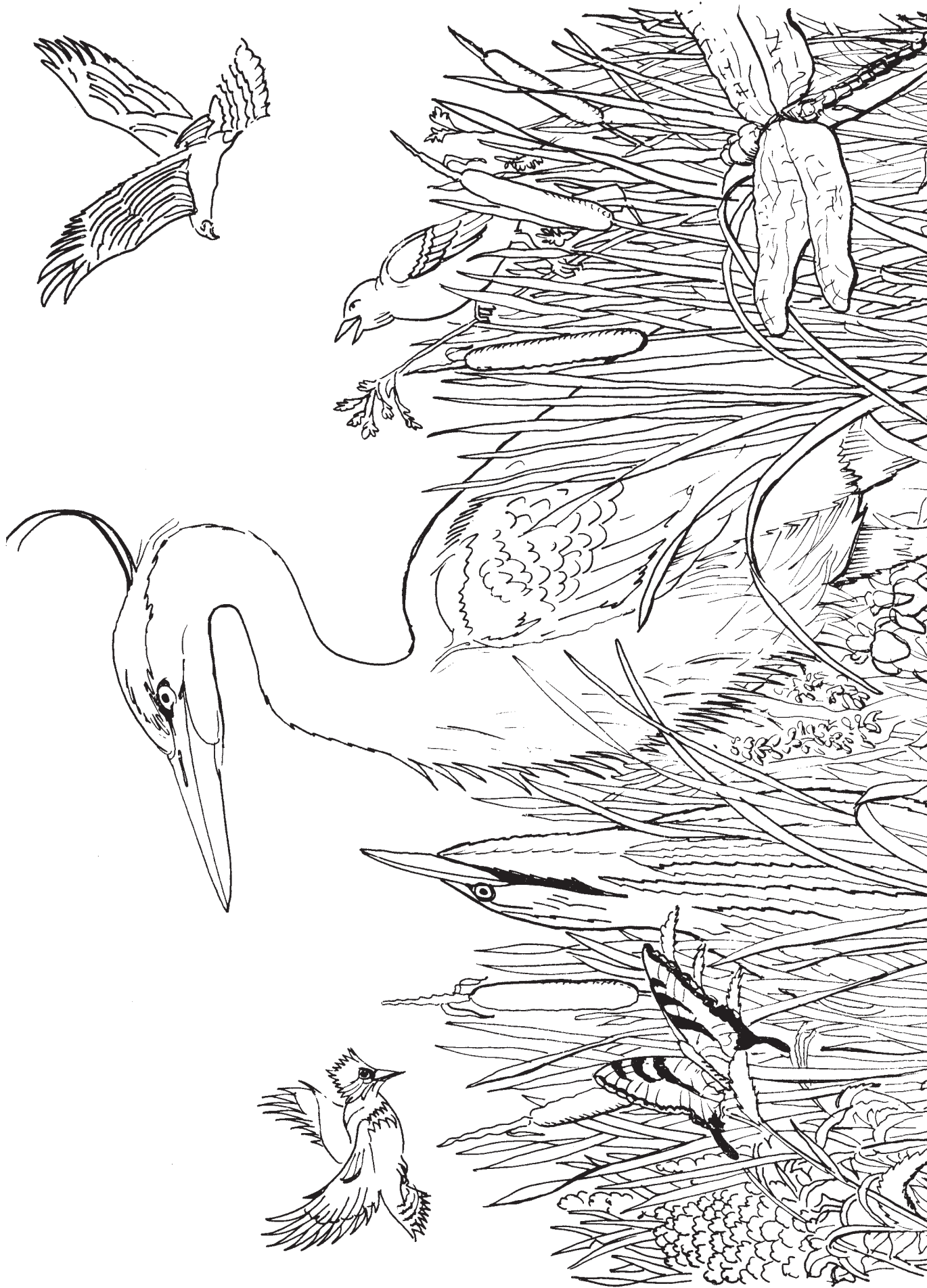
This is one of our most common ducks. Its name comes from the appearance of the male's tail when feeding. Seeds and aquatic plants are its main food, which it retrieves by ducking under the water's surface and “dabbling”, or straining water through its bill.



9. Wood Duck – *Aix sponsa*

Many naturalists refer to the wood duck as the most beautiful duck in North America, if not the world! Its petite bill is a distinguishing characteristic along with the male's multi-colored breeding plumage. As a perching duck, the wood duck is equipped with sharp claws that it uses to nest in cavities of tree trunks or large branches.







WETLANDS

PRESENTED BY THE WASHINGTON STATE DEPARTMENT OF ECOLOGY WITH FUNDS OBTAINED FROM NOAA UNDER THE COASTAL ZONE MANAGEMENT ACT.

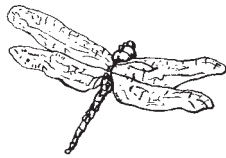
10. Western Tiger Swallowtail butterfly – *Papilio rutulus*

This relatively common butterfly receives its name from a long “tail” on its hindwings that resembles the long pointed tail of a swallow. The Tiger Swallowtail butterfly is not a poisonous butterfly, but many females take on a darker coloration to mimic its close relative, the Pipevine butterfly, which is poisonous.



11. Common Green Darner – *Anax junius*

Washington’s dragonflies come in just about every color of the rainbow. Common species are black, brown, blue, green, red, orange, yellow, white or gray, in various shades and combinations. The term “dragonfly” often includes damselflies (spreadwings, pond damsels, jewelwings) and dragonflies proper (petaltails, darners, clubtails, spiketails, cruisers, emeralds, and skimmers). They are all extremely active and fun to watch as they dance around freshwater wetlands.



12. Toe-biter beetle – *Abedus indentatus*

WARNING – This beetle is called a Toe-biter for a good reason! It can give a painful bite to humans. It is one of the largest true bugs. This ambush hunter prefers to eat small fish, tadpoles and small aquatic crustaceans, not human toes!



13. Signal Crayfish – *Pacifastacus leniusculus*

A native to our streams and lakes, this crayfish has been problematic in much of Europe. Accidentally introduced to the British Isles, it competes with their native crayfish that are much smaller and less aggressive. Despite its invasive tendencies in its non-native ranges, it is an integral part of our Northwest wetlands.



14. Northern Red-legged Frog – *Rana aurora aurora*

Smaller than the Californian red-legged frog, this decorated critter has a brownish gray coloration with fancy red legs and abdomen. It is hunted as a delicacy for its extraordinary legs. Introduced bull frogs, crayfish, sunfish, and largemouth bass compete for habitat and resources shared with the Red-legged frog, in turn greatly reducing their survival.



15. Painted Turtle – *Chrysemys picta picta*

Wetlands’ most common reptile, it is found across North America and has a very colorful shell. Even with bright colors it can be hard to spot because of its small size and shy, reclusive nature.



16. Rough-skinned Newt – *Taricha granulosa granulosa*

This is a large salamander that is warty, not slimy. It is light brown to black and has a yellow to orange belly. Be careful handling this critter - it is poisonous! Hidden beneath its bumpy skin are hundreds of glands that produce a powerful toxin, tetrodotoxin (TTX). This is one of the most potent toxins known to science, being 10 times more lethal than black widow spider venom and 10,000 times deadlier than cyanide. TTX is only dangerous if you ingest it, but just in case, remember to wash your hands after touching this newt.



17. Muskrat - *Ondatra zibethicus*

Neither a beaver nor a rat, this large water-dwelling rodent resembles a large field mouse. As its name implies, it produces a yellowish musky-smelling substance from its anal gland that is used for communication and attraction during the breeding season.



18. River Otter – *Lutra canadensis*

Weasel shaped, this otter lives in both fresh and salty water. It loves to feed on marine critters including crabs, fish, shrimp and even young seabirds. River otters sleep half their lives away in order to store up enough energy to play.



19. Beaver – *Castor canadensis*

The beaver is the largest rodent in North America. (It



is most similar to, but not most related to the Muskrat.) Made for the water, it has a large chunky body with a waterproof undercoat and layer of fat to help minimize heat loss in freezing conditions. Its specialized tail is broad and flat with large blackish scales that are used to slap the water’s surface to alarm other beavers of danger. (The beaver is nature’s engineer by building dams that provide habitat for many other plants and animals.)

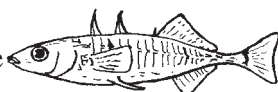
20. Olympic Mudminnow - *Normbra hubbsi*

This little cutie lives thousands of miles from its nearest relative and has quite a selective habitat requirement. It is often found in roadside drainage ditches on the Olympic peninsula. It doesn’t care for salty or fast moving waters, but can survive a wide range of temperature extremes (0-30 degrees C).



22. Three-spine Stickleback – *Gasterosteus aculeatus*

Being most amenable, the stickleback



flourishes in freshwater, saltwater and in varying degrees of brackish water. It especially favors places around eelgrass beds and pilings. Armored with thin bony plates, instead of scales, the Stickleback is quite small, often being less than 4 inches long. The Stickleback spawns mostly in freshwater, where a male builds a nest and guards the eggs.

21. Coho Salmon – *Oncorhynchus kisutch*

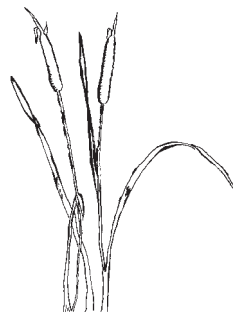
Salmon are found in saltwater and freshwater during different life stages.



These fish have thrilled humans with their complex migratory habits. Their annual returns to northwest rivers bring important nutrients back to the watershed and surrounding forests. Coho are identified by black spotting on their back and the upper lobe of the caudal fin, and by their white gums. Wetlands are essential rearing habitat for threatened and endangered pacific salmon.

23. Common Cattail – *Typha latifolia*

Cattails act as habitat and food for many marsh animals, including wrens, blackbirds, waterfowl, and muskrats.



They are widespread in fresh water communities, shallow bays, marshes, sloughs and ditches. Native people used cattail leaves in woven household goods.

24. Rush – *Juncus sp.*

Rushes are round! They are grasslike herbs used as nesting material, food and shelter by many insects, birds and small mammals. They are believed to be valuable in removing excess nutrients and heavy metals from urban stormwater.



25. Hardhack – *Spiraea douglasii*

Hardhack flowers are pink to deep rose. Its wiry branches were used by the Nuuchah-nulth people to make broom-like tools to help with collecting dentalia shells along the shore.



26. Sedge – *Carex sp.*

Sedges have edges! Sedges have triangular stems with leaves in three rows. They are used for weaving baskets. Most species produce a large crop of water dispersed fruits that are eaten by a variety of animals, insects, water birds, finches and some mammals.



27. White Bog Orchid – *Platanthera dilatata*

This very fragrant species can often be smelled before it is seen. It is referred to as a “scent-candle”. It is uncertain if this plant is poisonous or not. One story says it was used as bait for catching coyote and bears, while another says that the tuber-like roots are edible.



28. Round-leaf Sundew - *Drosera rotundifolia*

This oddball is a joy to find in sphagnum bogs or areas with acidic soils. This very small, insect eating plant has glandular, hair-like tentacles that secrete drops of sticky fluid. Relative of the famous Venus flytrap, the sundew is also a novelty item found in plant and souvenir shops.



29. Yellow Iris – *Iris pseudacorus*

This non-native (from Europe) has become well established and sometimes invasive in the Pacific Northwest. When not in bloom, it can be confused with the common cattail. Having strong and thick roots, it is a valuable species for sediment retention, shoreline stabilization, water quality enhancement and wildlife refuge.



30. Skunk Cabbage – *Lysichiton americanum*

Skunk cabbage is a fresh, succulent and unforgettable addition to the wetland. Its decaying flesh smell and alien appearance make the “swamp lantern” a marvel to the wetland. Skunk cabbage was rarely used as a food for native people, but was used as “Indian wax paper” for lining berry baskets, berry drying racks and steaming pits.



31. Yellow Pond-lily – *Nuphar luteum ssp. Polysepalum*

Aside from acting as a food and habitat source for animals, its floating leaves also provide shade and protection for algae and aquatic insects. It has club-like rhizomes, heart shaped leaves and waxy-yellow flowers.



32. Small Duckweed – *Lemna minor*

This is a single free floating leaf with one dangling root that commonly forms bright green mats on the surface of ponds. It grows in quiet, shallow fresh waters where it produces the world’s smallest flower and fruit.



33. Pondweed – *Potamogeton sp.*

Found in quiet lakes, sluggish streams, ponds and sloughs, pondweed is the largest and most diverse group of aquatic plants. It may sometimes be submerged. It is a highly important food for waterfowl and habitat for aquatic organisms.



