YOUNG NATURALISTS

BY Kathleen Weflen

Dancing With GREBES

For these water birds, spring begins with a fancy dance.

EARLY ONE MORNING in late April, a flock of black-and-white birds is flying in the clear blue sky above a shallow lake in western Minnesota. The birds fly with long necks stretched out in front and feet trailing behind. Could they be ducks or geese? Maybe herons or cranes?

Lowering their wings, the birds sail down to the water. Elegant as swans, they float on the ice-cold water. Diving in head first, hungry birds bring up small fish in their thin, pointed bills and swallow them whole.

Wildlife biologists believe these water birds have traveled all the way from the Oregon and California coasts to reach their summer home on this western Minnesota lake. They are western grebes. They are the only nesting bird species in Minnesota that has an east-west migration from the Pacific coast to Minnesota.

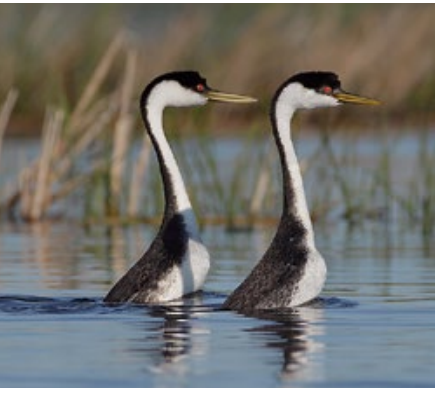
A western grebe *(Aechmophorus occidentalis)* has a black head, dark gray back, and white neck, chest, and belly. A male grebe and a female

DOMINIQUE BRAUD

grebe look similar, but she is a little smaller and has a shorter, thinner bill. In their feathered tuxedos, the grebes appear to be dressed for a special occasion. Spring is a special time—mating season. The birds are ready to put on a big show for each other.

Each grebe is looking for a mate to start a family. To find a partner, males and females will dive, then rise up and glide across the water together like dancers. After a few days of this ritual dance called *courtship*, the partners will mate, build a nest, and raise a family of grebe chicks.

Western grebe families nest in a colony, a neighborhood of nests in a marsh or a shallow lake. This story tells about western grebes mating and raising a family.



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BIRDS

Rushing

Grebes have many ways to tell each other they want to get together. A grebe advertises its presence by calling *kreed-kreet.* Soon after arriving at the lake, a male grebe and a female grebe swim around as a pair. Each one shows off to the other by dipping and shaking its head. The courting couple does a move called *barging:* Together they rise up and patter across the water with their feet while holding their bodies upright and nearly out of the water.

With bodies and heads low in the water, the two grebes face each other and call back and forth. This *ratchet call* is a loud, harsh trill, made with throat bulging, head crest raised, and bill pointed at the other bird. The red-eyed birds stare at each other for a moment or two, then suddenly arch their necks, turn to one side, lift their wings, rise, and run across the water together as if they were gliding across a ballroom floor. All at once, they dive into the water. During this *rushing,* the birds do not call. The only sounds are the pattering of feet and the splashing of water.

Sometimes two male grebes will do this rushing ceremony to attract females. Sometimes a female joins them, and the trio skips across the water like a chorus line of dancers.

WEED Dance

After rushing, the grebe couple is almost ready to mate. They show this by the way they move. Face to face, almost standing in the water, they gaze at one another. With necks stretched, crests raised, and tails cocked, they trill at the same time. After a few trills, one suddenly dips its bill and forehead into the water, lifts up, and shakes a couple of times. The other does the same thing.

Then the grebes swim away from each other. Each bird dives and comes up with plants in its bill. Now, both birds with weedy bills paddle their feet while rising vertically above water and moving toward each other. Chest to chest, they shake their heads from side to side. This *bob-shaking* ends when one bird tosses its plants away and lowers itself to float.

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After bob-shaking, the two grebes swim side by side with bodies arched. Suddenly, one runs its bill through the other's scapular (shoulder blade) feathers. They repeat this *bob-preening* many times.

DINNER

Now that the male and the female grebe are mates, she begs him to feed her. *KrDEE krDEE,* she calls. If he dives, she stops begging. If he comes up with a fish, she begs even louder until he gives it to her.

RON DUDLEY

COURTESY OF BEAU LIDDELL

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BUILD

One morning, the male grebe leads the female to a protected place in the water near bulrushes or cattails. He waits to see if she would like to nest here. Yes, she answers by diving and bringing up some soggy plants. Then he dives too. Together they pile up algae, moss, and stems of aquatic plants to make their nest. To keep the floating nest in place, they wrap parts of it around bulrushes or cattails.

After a couple of days, the nest is ready. The female sits on the nest, lifts her feathers, and clucks to show she wants to mate. The male mounts her and trills as they mate. Then they do more bob-shaking and bob-preening and add more plants to their nest.

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EGGS

One morning, the female grebe lays an egg in a low spot in the middle of the nest. The male stands guard to keep other birds away. He feeds her fish during the next three days as she lays two more eggs. The birds take turns sitting on the nest, incubating the eggs. Each bird has a large patch of bare skin on the belly to keep the eggs warm. Once in a while, they turn the eggs to make sure all sides stay warm.

PEEPING

Inside the eggshell, during the next three weeks, the cells of the egg divide and the embryo becomes a chick. Loud peeping inside the shell means the chick is ready to *pip*—break out. Atop its black bill, the chick has a tiny white egg tooth. Late one morning in June, the chick begins to peck its tooth against the shell. In less than half an hour of hammering, the cracked shell breaks open. The chick hatches.

Wet and peeping, the chick scoots to the rear of its dad. Dad moves a bit so the chick can climb up beneath his back feathers to stay warm and safe.

In the next two days, the other two chicks will hatch and join the first chick on Mom or Dad's back.

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BABIES

After all the chicks have hatched, the family leaves the nest for open water. Living on the water is dangerous for a downy little bird. Even though it can swim, it cannot yet dive or fly away. A gull could swoop down to snatch it from the water. A northern pike or a snapping turtle could swallow it from below. A beaver or a mink could eat it. For safety while they grow, the chicks ride on the back of a parent. If a human or other possible danger appears, the parent makes a ticking call as an alarm signal. Then the chicks nestle deeper in the parent's feathers, staying quiet and hidden.

This way of living is called *back-brooding*. When Mom wants to take a break from brooding, she lifts her body and flaps her wings to shake the young ones off. They paddle over to Dad. He stretches one foot atop the water so the young can climb aboard his back.

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BABY

While one parent broods, the other finds insect larvae (worms), crustaceans, and tiny fish to feed the young grebes. Mom clucks as she carries the food to her family. A young one pops up and begs. A bare yellow patch atop its head turns bright red—a sure sign of hunger. The little grebe takes a minnow from Mom and swallows it whole. From its first day, the chick has also eaten feathers fed by the parents.

Because she brings only one food item at a time, the mother grebe makes many food trips each minute. When all the young want to eat, she feeds the loudest, pushiest one first. Sometimes she passes the food to Dad to feed them.

After a while, the parents will trade places. Dad will bring some bigger meals for the growing grebes.

How PEOPLE Can Help Grebes

- Stay away from nest colonies
- Keep waters clean
- Save wetlands
- Tell your family and friends about grebes

COURTESY OF BEAU LIDDELL

OFF

After about a month of back-brooding, the young grebes have grown too big for all to fit on a parent's back. The dominant young one sometimes hitches a ride. Both parents still forage to feed their brood.

At night the parents and young ones gather in a large bay with other western grebes. To sleep, a grebe folds its neck and tucks its head among its back feathers. By staying in a large flock, the grebes are safer from predators. Some birds watch for danger. If a grebe sees a bald eagle soaring above or hears a great horned owl hooting nearby, it calls to warn the others.

DIVING

As the three juvenile grebes grow, they begin to look and act more like adult grebes. They swim across the lake, paddling with one foot and then the other. Their toes have lobes (pads) for swimming. To dive for food on smooth water, the grebe sticks its neck out, pushes its head down into the water, and gives a strong kick with both feet. On rough water, the grebe springs forward and then down. When alarmed, the bird opens its wings partway, pushes itself underwater, and beats its wings to escape.

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WALK

With its long, narrow body and feet set far back, the western grebe is a fine diver and swimmer. But this water bird can barely walk on land.

Since a grebe's wings are small for its weight, flying is a challenge. Like the common loon, the western grebe faces into the wind, runs across the water surface, and flaps its wings fast to get up in the air. Just about the only time that western grebes fly is during their spring and fall migrations.

In September the family joins a flock of grebes and flies west. The flock travels at night and stops on marshes and lakes to rest and feed during the day. When the birds reach the Pacific coast, they settle down on a bay for winter.

Next spring, western grebes will return to Minnesota to start new families.

Teachers resources

Find a Teachers Guide and other resources for this and other Young Naturalists stories at *mndnr.gov/young_naturalists*.