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## **Exploring Our Little Corner of the World with the Galiano Naturalists**

**by Rebecca Perry**

February can inspire courtship behavior not only among observers of Valentine's Day, but also among new and established pairings of our Gulf Islands' bald eagles.

As the hours of winter's daylight begin to gradually lengthen, these raptors engage in behaviors you might be able to hear before you have a chance to see.

As a prelude to mating, the male bald eagle's typical squeal becomes a high-pitched, you'd-better-notice-me screech. An interested female will respond with a slightly lower-pitched scream, and eventually their raucous calls will synchronize in united, uninhibited vocalizing.

Their courtship behaviors can also be visually stunning. The pair of eagles soar skyward, pause, lock talons and then plummet downward while doing cartwheels—breaking apart only at the last minute. “Sweetheart, you take my breath away” is more than a mere greeting card sentiment.

After being adequately wooed, the female indicates she's ready to copulate by dipping her head. Securely perched, she allows the male to land on her back with his talons closed and his wings outstretched for precarious balance. The male's tail and cloaca curl under the female's tail as she moves hers to the side. She turns her cloaca upwards, allowing their cloacae to touch..

Observing these intimate acts, noted eagle biologist David Hancock mused:

“What great moments of trust. These great predators who can instantly kill prey with their sharp and powerful talons are

now, so gently and trustfully, coming in direct contact. The trust that allows the female to accept the male's killing talons onto her vulnerable back is quite extraordinary—but it is an essential and ultimate act of the bonding that has been developed between them. No bonding, no trust, no mating, no young, no species!”

Although it's commonly believed that bald eagles mate for life, recent research suggests this may not always be true. In any case, the strong loyalty between mates may be due to the observation that some bald eagle pairs keep their relationship vibrant by ignoring the “season” and mating year ‘round.

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### **Natural Mysteries**

Last month's mystery was: What is sap and how does it get to the tops of even very tall trees? Sap is more than a mere greeting card sentiment. Sap is like tree blood. It carries water and minerals up from the roots to the leaves and then makes a U-turn and carries sugars and other nutrients made in the leaves down to the stem and roots. On the way up it flows through cells called xylem; on the way down it flows through cells called phloem, which are just under the bark. Up in the treetops, water is evaporating from leaf surfaces, and this loss of water creates a tension that pulls water/sap from below. The process depends on a continuous chain of water molecules clinging tightly to each other, their little molecular hands linked together desperately, and some people speculate that the height of trees is actually limited in part by the physical ability of water molecules to withstand these tensions.

This month's Natural Mystery: Where do seals sleep?

Have an answer? Send your thoughts to [galianonaturalists@gulfislands.com](mailto:galianonaturalists@gulfislands.com). Have a Natural Mystery of your own? Let us know, and we'll try to answer it.

THE GALIANO NATURALISTS are a group of curious explorers who enjoy observing, marveling, and sharing information about the natural world around us. Come join us. ([galianonaturalists@gulfislands.com](mailto:galianonaturalists@gulfislands.com))