

*Originally published in the November, 2005, issue of the **Active Page**:*

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

**by Kris Pitschka**

### **Where Have All the Dragonflies Gone?**

Turning another page on my calendar recently, I thought of the phrase “to everything there is a season”. Summer is now only a memory; the busy, sun-filled days have segued into a quieter, more contemplative mood. The transition happened rather quickly. For me, it seemed to occur in a single afternoon as I witnessed the death of a dragonfly in the cool, low rays of a late summer sun.

While this particular dragonfly met a somewhat untimely death in a perfectly-crafted spider web stretched across my windowpane, its time on earth could only have lasted a few more weeks, at most. Zipping through gardens or performing aerial acrobatics over sun-warmed ponds, dragonflies are as much a symbol of summer as bare feet and ice cream. But, like summer itself, their glory rarely lasts more than ten weeks.

Dragonflies - and their cousins, the damselflies - begin life as eggs, laid in a previous summer in ponds or streams. With some species, the eggs hatch within a few weeks; with others, they don't hatch till early spring. The hatchlings, called nymphs or larvae, remain in the water for at least one winter (or for as long as several years, in the case of particular species or harsher climates). During this period they molt many times before reaching their final pre-adult size and form. Finally, as weather warms in spring or early summer, nymphs begin to crawl out of the water, onto plants or rocks, to complete their final metamorphosis. As in previous molts, their

outer casing splits; but this time, instead of emerging as larger nymphs, they emerge as full-grown dragonflies. Shortly after emerging, a blood-like fluid is pumped into the wings to unfurl and stiffen them for flight.

Dragonflies then begin to fill the air, spreading out from their natal ponds in search of their favorite foods: mosquitoes, flies and other insects. After several weeks of carefree gluttony, they reach sexual maturity and link up - quite literally - with one of the opposite sex. They can often be seen together, flying or resting in what is called the “wheel position,” an insect's version of a kama sutra position. They then return to the water, where the female deposits her fertilized eggs directly into the water or onto aquatic plants. Thus, the life cycle is completed. The dragonflies' mission has been accomplished; and, though they may escape being eaten by one of their predators (a bird, a fish or perhaps a lucky spider), they will not survive the first frosts of fall.

Dragonflies differ from damselflies in a number of ways. The dragonfly is the larger of the two, with wings that are always held straight out, at right angles to its body. The two pairs of wings are unequal in width, the forewings being narrower than the hindwings. The eyes are huge and bulbous, covering so much of its head that they actually meet at the top; and, with hundreds of individual lenses, they offer a near-360 degree view. The damselfly, as its name implies, is smaller and daintier, with equal-sized wings that, in all but a few species, are held against its body when resting. Its eyes are similar to the dragonfly's, but smaller and spaced farther apart.

The nymphs of these two types have distinct differences, too. The dragonfly nymph breathes by taking water in through

its anus to a special cavity where it extracts the oxygen with internal gills. By expelling the water forcefully, it can also create its own jet propulsion for catching prey or evading predators. The ever-dainty damselfly, on the other hand, relies on three feathery, tail-like appendages which, when swished about, absorb oxygen from the water and can also be used to propel the nymph gently forward. Nymphs are voracious eaters, anticipating their future diet, perhaps, by eating the larval forms of the mosquitoes and other insects that will dominate their diet as adults.

The earliest dragonfly fossils date back to the Carboniferous Period of 300 million years ago, before the existence of dinosaurs. Some of these early dragonflies had wingspans of up to 70 cm, equal to that of a small hawk; but our largest specimens today are a mere fraction of that size. Contrary to some once-common beliefs, they cannot stitch up the mouths of naughty children, or sting, or harm humans in any way. They are incredibly fast and agile flyers, able to hover, change directions in an instant, and even fly sideways and backwards; and they have been clocked at speeds of over 50 km per hour. No wonder they are such a magnificent presence in our skies!

Although habitats for these delightful creatures are being lost throughout the world - due to pollution and encroaching urban development - we on Galiano Island are fortunate to have numerous lakes, ponds and other wetlands, many of which are on protected public lands. Dragonflies may be gone for now, but as long as we take care to preserve their homes, we can look forward to their return each year. In the meantime, look carefully into Galiano's ponds this fall or winter, and you may witness the first stirrings of next summer's dragonflies.

\* \* \*

## Natural Mysteries

October's mystery was: Why do raccoons "wash" their food? Wash? Who says Galiano raccoons are so fastidious? They're more likely to raid a garbage can or stuff their mouth with cherries off your tree and take off running. Forget about the niceties of washing and "please" and "thank you". But when they're near water, raccoons often dunk their food. When we see this behavior, with our need to anthropomorphize everything in nature, we call it "washing" when in fact it has nothing to do with hygiene. Raccoons evolved as omnivorous, but before there were your garbage cans and gardens, they found much of their food in streams and rivers. With exquisite tactile sense, they dip their fingers in the water and feel around for a crawdad or frog, and they might turn it this way and that as they sense what they've got. But if they're foraging upland, they won't drag their food to the nearest creek to give it a good scrubbing. They'll just eat. Still, the myth dies hard, and whenever we see a raccoon dousing their food in water, we'll think of it as "washing". And we'll be just like the scientist who originally named the animal *Procyon lotor*. *Lotor* is Latin for "washer".

This month's Natural Mystery: Mushrooms are often able to push up through heavy soil, rocks – even blacktop! Does anyone know how? And how many pounds per square inch they can lift?

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))