

Merlins and fidelity—it's not what you think, Merlins and witches' brooms

by John Morton

About this time last year, I had a pair of merlins make their home on the vacant one acre-lot behind my house. Merlins are small falcons that mostly eat small birds. Called “pigeon hawks” by falconers, they are found worldwide, breeding from about the 40th parallel to the arctic tundra.

Three subspecies are recognized in North America: the taiga merlin, which inhabits the boreal and northern forest regions, the black merlin, which inhabits coastal conifer in the Pacific Northwest, and the prairie merlin, which is found in the northern prairies and aspen parklands of the northcentral U.S. and Canada. The pair terrorizing chickadees in my backyard was certainly of the taiga variety.

Long before I found their nest, I heard their “ki-ki-ki-kee” as they defended their air space from gulls, ravens, and even bald eagles. It took me a while to find the nest because the grayish male was everywhere but at the nest, as it defended its turf. I occasionally saw the reddish-brown female, but she was sly about giving away the nest location.

At least a couple of weeks past before I spotted her banded tail sticking out of a witches' broom about 45 feet up a large white spruce. She was clearly incubating and I continued to watch the nest for another week or so. Although the literature indicates that the male will share in incubation, I never saw him on the nest. The nest failed to produce any young. I suspect that a pair of resident ravens eventually got to the eggs.

Well, what prompted me to write this story is that the merlins are back again. Same spruce, same witches' broom, same nest. This is a phenomenon that biologists have labeled “high site fidelity.” Mariana crows, which I studied for years, exhibit high site fidelity, sometimes nesting in the same group of trees for years. It got me to wondering if merlins, like these tropical crows, showed other similar behaviors like, pairing for life.

Merlins are, in fact, generally monogamous but only for a season. They apparently pair each season. Since the male arrives on the breeding grounds first, I am assuming that the male in my back yard is last year's male with a new mate. Hopefully this new mar-

ital arrangement will result in the successful rearing of a family this summer.

Merlins lay three to six eggs. They are good parents, investing a lot in their family: a month of incubation, a month of chick rearing and perhaps six weeks of teaching their fledged young to hunt. So if they start laying eggs in mid-May, I should probably expect them to continue chasing my juncos and sparrows until September if all goes well.

The literature also suggests that merlins typically nest in abandoned crow or hawk nests, rarely using the same nest in consecutive years. So the event in my backyard is unusual on two counts: they are using the same nest and the nest is a witches' broom.

Witches' brooms are caused by the spruce broom rust, *Chrysomyxa arctostaphyli*. Rusts are obligate fungal parasites that have a complex life cycle, generally requiring two hosts. The yellow-orange color of the witches' broom (the “rust”) is produced by spores in new branches that die later that winter. However, because the disease goes systemic in the spruce tree, new needles in an established broom produce the yellow-orange spores each year. The alternate host for spruce broom rust is kinnikinnick (bearberry). Some of the larger witches' brooms can provide quite well-disguised nesting sites for a variety of critters.

Although widespread across North America, we really don't have a handle on the health of merlin populations. Merlin populations are difficult to monitor because they are difficult to identify (especially to subspecies), they breed at low densities and they are difficult to detect later in the summer when most bird surveys are conducted. I consider myself lucky to have merlins breeding so close, especially when I know my neighbor will be building a house on his lot in the next year or two. Knowing that the male merlin will inevitably have to take up residence elsewhere despite his site fidelity, makes this year's breeding effort that much more special.

John Morton is the Supervisory Fish & Wildlife Biologist at the Kenai National Wildlife Refuge. Previous Refuge Notebook columns can be viewed on the Web at <http://www.fws.gov/refuge/kenai/>.