



**Figure 9-5:** Territorial and mating displays of male **Anna's Hummingbird** and **Allen's Hummingbird**

## UCSC Arboretum and the Farm

UCSC'S 75-ACRE ARBORETUM, ON EMPIRE GRADE, is almost as old as the campus itself. It began with a gift of diverse eucalyptus trees. The quiet grove has anchored the southeast corner of the Arboretum, which is now better known for its large gardens of shrubs from New Zealand, Australia, and South Africa (for more on the Arboretum see Chapter 3, Plants). Florally, here are the antipodes in our midst. While an arboretum filled with such an exotic flora may be a native plant devotee's idea of Hell, it provides something like Heaven for many birds.

The most famous Arboretum birds are its hummingbirds. They congregate mostly in the South African gardens and on the "Hummingbird Trail" through the Australian gardens (Figure 9-1, location 18). Anna's Hummingbirds always abound here. The males sing their insect-like song all year long, but their sexual and territorial displays reach a fever pitch in the late fall and early winter. Then these green-backed, gray-bellied hummingbirds claim bush-top perches, where they sing tirelessly and flash their brilliant, magenta throats (called *gorgets*) and faces at rivals and at females. From many angles the females look rather like the males, but from face-on one sees that they lack the gaudy gorget and facial shield.

### Allen's vs. Anna's Hummingbirds

One way to distinguish Anna's from Allen's hummingbirds is to observe their dramatic aerial displays (Figure 9-5). Winter is the best time to watch the male Anna's Hummingbirds in action. After a rapid climb into the sky and a breathtaking vertical dive, the bird snaps out from its plunge with a quick, whistling pop from air rushing through its spread tail feathers.

In a rather different display, the male Allen's Hummingbird noisily traces several pendulum-like arcs. At the top of each swing the bird trembles, contorts its body, and tips its tail wren-like over its back. Suddenly the bird breaks free of this dance and climbs to a considerable height, turns, and swoops obliquely down, as if hell-bent on a ski jump. The rapidly descending bird spreads its tail feathers to produce a characteristic moan, which one expert local observer, David Suddjian, has likened to the zing of a ricocheting bullet.

Like all this big clan of tiny birds, female Anna's and Allen's hummingbirds visit the males to copulate, then build and tend their nests and raise their young alone. They make their well-camouflaged nests from lichens and leaf-bits bound by spider silk and secured usually to horizontal twigs or toward the drooping ends of low branches. All these nests are exceptionally hard to find even with diligent searching.

The voice of a perched Allen's Hummingbird differs from that of Anna's, and the feather-generated hum of the one species as it dashes by is not like that of the other. With careful attention, the listener will soon be able to distinguish the two species' songs and their non-vocal sounds. But it is not a cinch: tiny though their voices are, our hummingbirds vocalize variously when greeting acquaintances, claiming ground, courting mates, chasing rivals, or "just singing." In this respect their sounds are easily as varied as some songbirds'.