

A CLOSER LOOK

By Kimball Garrett

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The Western Grebe is an abundant wintering bird along the southern California coast, with small flocks remaining locally through the summer. It is also a resident locally at the Salton Sea and along the Colorado River (common at Lake Havasu). Near the coast it breeds only very locally, as at Sweetwater Reservoir near San Diego. In winter and during migration, individuals or flocks are often encountered on other deep freshwater lakes in the region. As a species, it presents no particular field problem; its clean black and white neck--very long for a grebe--and its long yellowish bill, combined with its large size, help distinguish it from other grebes. But few readers may be aware that the Western Grebe has two distinct color morphs, both of which occur in southern California. Furthermore, at least one recent author has presented evidence that these morphs may even represent distinct biological species. Below, I will briefly summarize the distinguishing features of these two types of Western Grebes, first discussing the history of their taxonomic status.

In the middle of the nineteenth century, when the Western Grebe was first described, the light and dark color phases were each given the status of a full species. This is hardly surprising, as the taxonomic thinking of a hundred years ago dictated that almost any form differing noticeably in appearance from known, previously classified forms be treated as a separate species. The dark phase was known as Podiceps occidentalis (we now know the Western Grebe as Aechmophorus occidentalis), and the light phase was dubbed Podiceps clarkii. The American Ornithologists' Union has, however, long considered the two color phases part of the same species. Robert Storer (The Living Bird 4:59-63, 1965) has described and depicted these two forms, and a recently completed study by John Ratti of Utah State University (Auk 96:573-586, 1979) has shed new light on the species question.

Typical birds of the two color phases are rather easily recognized in the field. Here is a summary of the major differences between the light and the dark phases:

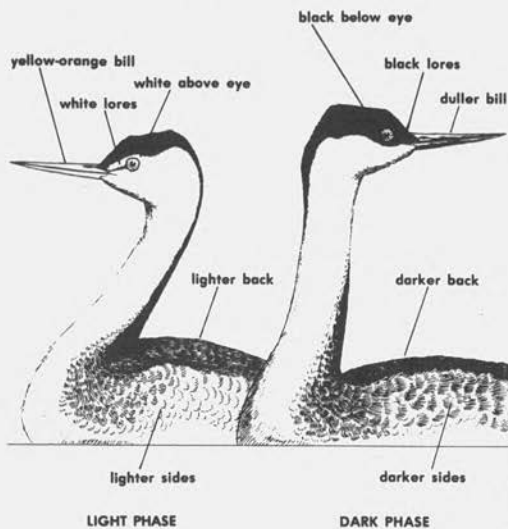
	LIGHT PHASE	DARK PHASE
Bill:	Bright orange-yellow	Dull greenish-yellow
Crown:	Black not reaching lores or eyes	Black extends to lores and below eyes
Back:	Paler gray	Darker gray
Flanks:	Whitish	Mottled gray

A small minority of birds are intermediate in some or all of these characters. Additionally, there may be a tendency for

the lores of dark-phased birds to lighten somewhat in winter. Dark-phased birds predominate in breeding colonies through western North America, with local exceptions (e.g., Goose Lake in northern California where light-phased birds comprise over 90% of the breeding population). In Mexico light-phased birds predominate in many populations. Winter ratios of the two forms are not well-known, but dark-phased birds certainly predominate along the southern California coast. Readers could contribute much information by noting the relative abundances of these two phases along the coast in winter. A critical look at the resident populations along the Colorado River and at the Salton Sea, and at wintering populations elsewhere in the interior could also shed much light on the biology of these birds.

The light and dark morphs of the Western Grebe show little ecological divergence; that is, their habitat and food preferences differ little, if at all. Some segregation in foraging sites and diving habits has been noted in a study at Clear Lake, California, but little analysis has been done on the wintering grounds.

Ratti's arguments for considering the dark and light morphs true biological species center on studies of mixed colonies which have revealed a very low incidence of mixed pairs. At the Bear River Refuge at the north end of the Great Salt Lake (where most of the surveys were conducted), dark birds paired with other dark birds and light birds with other light birds. Only about one pair in a hundred was mixed dark X light. This "assortative" mating seems compatible with the modern biological species concept which emphasizes reproductive isolation of populations; in short, the two phases behave biologically as separate species. But don't go racing to amend your various lists yet; this unusual situation will require even more extensive study before any taxonomic changes are made.



Color Morphs of the Western Grebe

Illustration by Kimball Garrett