

and Sweden, there can be little doubt that, if possible, they would have been propagated. In the Jardin des Plantes, no bird of prey has been known to couple.³³ No hawk, vulture, or owl has ever produced fertile eggs in the Zoological Gardens, or in the old Surrey Gardens, with the exception, in the former place on one occasion, of a condor and a kite (*Milvus niger*). Yet several species, namely, the *Aquila fusca*, *Haliaetus leucocephalus*, *Falco tinnunculus*, *F. subbuteo*, and *Buteo vulgaris*, have been seen to couple in the Zoological Gardens. Mr. Morris³⁴ mentions as a unique fact that a kestrel (*Falco tinnunculus*) bred in an aviary. The one kind of owl which has been known to couple in the Zoological Gardens was the Eagle Owl (*Bubo maximus*); and this species shows a special inclination to breed in captivity; for a pair at Arundel Castle, kept more nearly in a state of nature "than ever fell to the lot of an animal deprived of its liberty,"³⁵ actually reared their young. Mr. Gurney has given another instance of this same owl breeding in confinement; and he records the case of a second species of owl, the *Strix passerina*, breeding in captivity.³⁶

Of the smaller graminivorous birds, many kinds have been kept tame in their native countries, and have lived long; yet, as the highest authority on cage-birds³⁷ remarks, their propagation is "uncommonly difficult." The canary-bird shows that there is no inherent difficulty in these birds breeding freely in confinement; and Audubon says³⁸ that the *Fringilla (Spiza) ciris* of North America breeds as perfectly as the canary. The difficulty with the many finches which have been kept in confinement is all the more remarkable as more than a dozen species could be named which have yielded hybrids with the canary; but hardly any of these, with the exception of the siskin (*Fringilla spinus*), have reproduced their own kind. Even the bullfinch (*Loxia pyrrhula*) has bred as frequently with the canary, though belonging to a distinct genus, as with its own species.³⁹ With respect to the skylark (*Alauda arvensis*), I have heard of birds living for seven years in an aviary, which never produced young; and a great London bird-fancier assured me that he had never known an instance of their breeding; nevertheless one case has been recorded.⁴⁰ In the nine-year Report from the Zoological Society, twenty-four

³³ F. Cuvier, 'Annal. du Muséum,' tom. ix. p. 128.

³⁴ 'The Zoologist,' vol. vii.-viii., 1849-50, p. 2648.

³⁵ Knox, 'Ornithological Rambles in Sussex,' p. 91.

³⁶ 'The Zoologist,' vol. vii.-viii., 1849-50, p. 2566; vol. ix.-x., 1851-2, p. 3207.

³⁷ Bechstein, 'Naturgesch. der Stubenvögel,' 1840, s. 20.

³⁸ 'Ornithological Biography,' vol. v. p. 517.

³⁹ A case is recorded in 'The Zoologist,' vol. i.-ii., 1843-45, p. 453. For the siskin breeding, vol. iii.-iv., 1845-46, p. 1075. Bechstein, 'Stubenvögel,' s. 139, speaks of bullfinches making nests, but rarely producing young.

⁴⁰ Yarrell's 'Hist. British Birds,' 1839, vol. i. p. 412.