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THE CHIMNEY SWIFT.

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In general the scientific classification of our native birds seems reasonable enough. For instance, anyone can see the mutual relationship of the ducks, geese and swans included in the order Anseres; and the "hen-like" characteristics common to the turkeys, grouse, ptarmigans and quail embraced in the order Gallinae are very evident. And so it is with most of the other orders. Even the Passeres or Perching Birds, which form the largest division of all, comprising all the "smalle fowle that make melodie," diverse as the species are in many respects, are joined, most of them, by the manifest bond of song.

But there is one small order known as the Macrochires, that is calculated to disturb the enquiring layman by the dissimilarity of its species. For when he finds the grotesque whip-poor-will and the eccentric chimney swift classed with the exquisite humming bird, he is apt to harbour a dark suspicion that the systematist, finding at the conclusion of his labours several aberrant and unrelated forms left over, threw them hastily together into one miscellaneous order, and called it Macrochires.

The suspicion, however, would be ill-founded. Different as the birds are in outward seeming, similarities in their anatomy indicate unmistakably a common line of descent. And if food habits afforded any evidence of relationship, it could be pointed out that the humming bird's taste does not differ so much as is generally supposed from that of its kinsfolk, the flycatching swift or whip-poor-will. While popularly believed to live exclusively on nectar, the humming bird in reality consumes large numbers of small insects; and when we see it delicately probing a blossom, it is actually looking as much for little spiders as for flower syrup.

But analogous food habits are no indication whatever of blood relationship, although they often bring about astonishing likeness in external appearance. The mammalian bat, seeking its prey in the air, has developed wings and attained the bird's power of flight. And the warm-blooded, air-breathing whale, making his living in the sea, is

always taken by the uninitiated for a fish. But these are extreme cases, and the chimney swift offers a less violent example. This bird is not at all closely related to the swallows (which belong to the order Passeres), but catching its insect food on the wing in sustained flight exactly as they do, it has developed so many of their peculiarities, that not so very long ago ornithologists included it in the swallow family, and it is still very commonly called the chimney "swallow."

Swifts are found all over the world, but compared with many other like divisions of birds, the family is a small one, including only some seventy-five species. They are all noted for their wonderfully rapid flight, whence their popular name. But what distinguishes them most among birds is the remarkable mucus secretion of their salivary glands, used by the majority of them in the construction of their nests. Many species merely glue the nest material together with the secretion, but a genus in the eastern tropics (*Collocalia*) build their nests entirely of this gelatinous substance. These nests, from which the Chinese concoct their famous bird's-nest soup, are such strange productions that it is hard to believe that they are composed solely of an internal secretion of the bird. An ingenious native explanation of their origin, worthy of our own nature-fakirs, is that the birds obtain the mucilaginous shreds by annoying a large holothurian, common along the seashore in the east and known as a sea-slug, until the exasperated creature throws out long slimy strings at them, which they gather up and carry away for their nests. The less picturesque but equally incorrect theory of Western science was that the nests were mostly composed of partially digested seaweed. It is now known, however, that, leaving out of consideration some adventitious dirt, the nests of this genus consist of practically nothing but mucus.

About one-half of the known species of swifts are natives of the New World, but most of them are confined to the southern continent, only four