

## CHAPTER XXI.

## Humming Birds.

No subject of Natural History has, since the discovery of the New World, excited the admiration of mankind more than this diminutive favorite of nature; which before the time of Columbus was unknown to the Old World. Though it abounds more in the warm regions, it is, however, dispersed over every part of America and its islands, in almost every climate, for it is found in summer months in Hudson's Bay and Canada. Captain Cook brought many fine specimens from Nootka Sound, and I now add several new species from the temperate Table-land of Mexico, and the

woods in the vicinity of the snow mountains of Orizaba, Pepocatpetl, &c.

There is not, it may safely be asserted, in all the varied works of nature in her zoological productions, any family that can bear a comparison, for singularity of form, splendour of colour, or number and variety of species, with this the smallest of the feathered creation. In my former collection the variety of different species amounted to near a hundred, and every day brings us acquainted with more. In Jamaica I procured the smallest known, which is considerably less than some of the bees;—and in Mexico many new species, whose splendid colours glow with a brilliancy and lustre not surpassed by any with which we were previously acquainted.

It has been a subject of much regret that the natural history and manners of the



numerous species which compose this extraordinary little family were almost unknown; I have, therefore, paid all the attention in my power towards completing this desideratum, but yet much will be wanting. The first I ever saw alive of these minute creatures was in the yard of the house of Mr. Miller, in Kingston, Jamaica. He had taken his station on the twig of a large tamarind tree, which was close to the house and overspread part of the yard: there, perfectly indifferent to the number of persons constantly passing within a few yards, he spent most of the day. There were few blossoms on the tree, and it was not the breeding season, yet he most pertinaciously kept absolute possession of his dominions; for the moment any other bird, though ten times as large as himself, approached near

his tree, he attacked it most furiously, and drove it off, always returning to the same twig he had before occupied, which he had worn quite bare of leaves for three or four inches by constantly perching on it. I often approached within a few feet, with pleasure observing his tiny operation of dressing and pluming, and listening to his weak, simple, and often-repeated note. I could easily have caught him, but was unwilling to destroy so interesting a little visitant, who had afforded me so much pleasure. In my excursions round Kingston I procured many of the same species, as well as the long-tailed black and a few others; and especially the one I have mentioned as the smallest yet described, but which has the finest voice of any.

I spent some agreeable hours in the place that had been the Botanical Garden of Jamaica, and on the various trees now



growing to a luxurious size met with many curious birds, among which this specimen was perched on the highest branch of the bread-fruit or cabbage tree. He poured forth his slight querulous note among a most curious assemblage of the valuable indigenous and exotic plants and trees of the island, on a spot, once the pride of Jamaica, but now a deserted wilderness. The various individuals of this charming little race are, as I have observed, scattered over the whole American continent and its islands; every district and island producing its local inhabitants. Near Kingston I found only four kinds, all known to naturalists. But in Mexico the species are numerous, and mostly new or undescribed. Near the capital, on my arrival, scarcely one was to be seen, but in the months of May and June numbers were found in the Botanic Garden, in the

centre of the city, and by offering a reward to the Indians many were brought to me alive. I had nearly seventy in cages, which with attention and care I kept living for some weeks; and could I have devoted my whole attention to them, I have no doubt of the possibility of bringing them alive to Europe. The accounts of their being so fierce and untameable as to beat themselves to death when confined are not true; no bird is more easily reconciled to its new situation. It is true they are seldom off the wing, but never beat themselves against the cage, nor the glass of a window; they remain, as it were, suspended in the air, in a space barely sufficient for them to move their wings, and the humming noise proceeds entirely from the surprising velocity with which they perform that motion, by which they will keep their bodies in the air, ap-



parently motionless, for hours together. In each cage was placed a small earthen cup, about half filled with sugar and water of the consistence of a thin syrup: in this various flowers had been inserted, principally the yellow bell-shaped corolla of the great aloe (*Agava Americana*); the end of which next the stem being cut off permitted the liquid to flow into the flower, into which the little prisoners were constantly inserting their long bifid tongues, and drawing up its luscious contents. This operation was generally, like most of the actions of the bird, performed on the wing, but they sometimes alighted on the flower, perching against its sides in an upright position, and pumping up the mucilaginous liquid.

It is probable the whole of them feed on insects; numbers I am certain do so, having watched them attentively in the

Botanic Garden at Mexico, in pursuit of their minute prey; and in the yard of the house in which I resided at Themascaltepec, when one of them took entire possession of a pomegranate tree in blossom, on which he sat the whole day, catching the small flies that came to the flowers.

Naturalists have therefore fallen into error in asserting that these birds live entirely on the saccharine substance contained in flowers, as I have very frequently seen them take flies and other insects on the wing, and have on dissection found them in their stomachs.

There is little doubt that, with a supply of this food, as well as syrup, honey, &c. they might be kept alive in large cages; those in which I made my experiment were much too small for the purpose.

Although, like the robin and other birds of Europe, in a state of nature they are



extremely tenacious of any intrusion of their own species on their dominions, yet in captivity, when several kinds have been confined together, I never observed the least inclination to quarrel, but have seen the smaller take what appeared to be unwarrantable liberties with those of five times their size and strength:—thus, when the perch has been occupied by the great Blue-throated one, the diminutive Mexican Star has settled on the long beak of the former, and remained perched on it some minutes, without its offering to resent the insult.

The house I resided in at Xalappa for several weeks, on my return to Vera Cruz, was only one story high, enclosing, like most of the Spanish houses, a small garden in the centre, the roof projecting six or seven feet from the walls, covering a walk all round, and leaving a small space only

between the tiles and the trees which grew in the centre. From the edges of these tiles to the branches of the trees in the garden, the spiders had spread their innumerable webs so closely and compact that they resembled a net. I have frequently watched with much amusement the cautious peregrination of the humming bird, who, advancing beneath the web, entered the various labyrinths and cells in search of entangled flies, but as the larger spiders did not tamely surrender their booty, the invader was often compelled to retreat; being within a few feet, I could observe all their evolutions with great precision. The active little bird generally passed once or twice round the court, as if to reconnoitre his ground, and commenced his attack by going carefully under the nets of the wily insect, and seizing by surprise the smallest entangled flies, or those that were most feeble. In



ascending the angular traps of the spider great care and skill was required; sometimes he had scarcely room for his little wings to perform their office, and the least deviation would have entangled him in the complex machinery of the web, and involved him in ruin. It was only the works of the smaller spider that he durst attack, as the largest rose to the defence of their citadels, when the besieger would shoot off like a sunbeam, and could only be traced by the luminous glow of his refulgent colours. The bird generally spent about ten minutes in this predatory excursion, and then alighted on a branch of an *Avocata* to rest and refresh himself, placing his crimson star-like breast to the sun, which then presented all the glowing fire of the ruby, and surpassed in lustre the diadem of monarchs. Europeans who have seen only the stuffed remains of these little feathered gems in

museums have been charmed with their beautiful appearance; but those who have examined them whilst living, displaying their moving crests, throats, and tails, like the peacock in the sun, can never look with pleasure on their mutilated forms. I have carefully preserved about two hundred specimens, in the best possible manner, yet they are still but the shadow of what they were in life. The reason is obvious; for the sides of the laminae, or fibres of each feather, being of a different colour from the surface, will change when seen in a front or oblique direction; and as each lamina or fibre turns upon the axis of the quill, the least motion, when living, causes the feathers to change suddenly to the most opposite hues. Thus the one from Nootka Sound changes its expanded throat from the most vivid fire-colour to light green; the Topaz-



throated does the same; and the Mexican Star changes from bright crimson to blue.

The sexes vary greatly in the plumage in many of the species; so much so that it is with difficulty we recognise them. The male and female of the Mexican Star could not have been known had they not been seen constantly together, and proved to be so by dissection. They breed in Mexico in June and July; and the nest is a beautiful specimen of the architectural talent of these birds: it is neatly constructed with cotton, or the down of thistles, to which is fastened on the outside, by some glutinous substance, a white flat lichen resembling ours.

The female lays two eggs, perfectly white, and large for the size of the bird; and the Indians informed me they were hatched in three weeks by the male and female sitting alternately. When attending their young,

they attack any bird indiscriminately that approaches the nest. Their motions, when under the influence of anger or fear are very violent, and their flight rapid as an arrow; the eye cannot follow them, but the shrill piercing shriek which they utter on the wing may be heard when the bird is invisible, and often led to their destruction by preparing me for their approach. They attack the eyes of the larger birds, and their sharp needle-like bill is a truly formidable weapon in this kind of warfare. Nothing can exceed their fierceness when one of their own species invades their territory during the breeding season. Under the influence of jealousy they become perfect furies; their throats swell, their crests, tails, and wings expand; they fight in the air (uttering a shrill noise,) till one falls exhausted to the ground. I witnessed a combat of this kind near Otumba, during



a heavy fall of rain, every separate drop of which I supposed sufficient to have beaten the puny warriors to the earth.

In sleeping they frequently suspend themselves by the feet, with their heads downwards, in the manner of some parrots.

These birds were great favorites of the ancient Mexicans. They used the feathers as ornaments for their superb mantles in the time of Montezuma, and in embroidering the pictures so much extolled by Cortez. Their name signifies in the Indian language beams or locks of the sun;—they are still worn by the Indian ladies as ornaments for the ears.

#### CHAPTER XXII.

Agriculture.—Wheat.—Barley.—Indian Corn, or Maize.—  
Fricollis.—Bananas.—The Great Aloe.—Pulque.

THE Agriculturists of New Spain, like the artists and manufacturers, are considerably behind those of Europe. The fineness of the soil and climate renders less labour and management necessary than with us; and the laying of manure on the land seems to be little practised. The outskirts of the cities furnish this article in abundance, yet it remains unemployed. Irrigation has been used from the earliest period. A simple plough of wood, pointed with iron, is drawn by two oxen, which are fastened to it by the horns; it is directed by an Indian with one hand, whilst with the