

of dazzling hues of orange, scarlet, and crimson. Here, too, was seen the Quezal, amid surroundings no less magnificent than itself.

Leaving the horses in the open basin of an ancient volcano surrounded by forest, Mr. Ridgway proceeded on foot to the summit of the cinder cone, but the view was disappointing, as the crater was filled with dense clouds, except for one moment, when a strong wind dispersed the mass of vapour and allowed a brief glimpse of the boiling lake, 400 metres below. From the summit a descent was made to the lagoon, another extinct crater filled with clear water almost icy in its coldness and surrounded by dense forest. The time spent on Poas was too short to learn much of the birds, but except at the summit they were everywhere found in great numbers.

At Bonilla, an estate on the Atlantic slope near Turrialba, the roughness of the ground and the density of vegetation in the hot humid zone made it very difficult to collect, but in the cleared areas, where the 'potreros' or pastures are found, the variety and abundance of birds was remarkable. In one locality at least four hundred species were obtained, and in the thick growth many escaped capture, while humming-birds were so plentiful that fifteen species were shot round one flowering 'guava' tree. From here also was witnessed a flight of migrating hawks, passing northwards in hundreds and thousands.

At Coliblanco, near Turrialba (6500 feet), the trees, including the brilliant scarlet-flowering *Erythrina*, were covered with creepers and epiphytes, while near the water-courses at least three species of magnificent tree-ferns were common, as well as *Caladium*-like plants with leaves large enough to form a shelter against rain. As might be expected at this altitude, the birds were mostly different from those of Bonilla.

Another interesting place was Pigres, at the mouth of the Rio Grande de Tarcoles, in the Gulf of Nicoya. Between this and the mainland proper lies the 'estero,' a broad creek of smooth water, bordered by dense mangrove swamps, somewhat narrow on the Pigres side where the land mostly consists of bare sand, but in places covered with trailing *Ipomœa*, bearing broad leathery leaves and pink flowers; matted clusters of thorny leguminous shrubs and thickets of low spreading mimosa-like trees interspersed with the poisonous manzanilla, formed the rest of the vegetation. Notwithstanding the dry season and the almost total absence of flowers, birds were very numerous in the vicinity of the village. Immediately beyond the fringe of mangrove swamps, on the other side of the 'estero,' a high mixed forest extended for many miles, the undergrowth consisting chiefly of small biscoyal palms bristling with long slender thorns of needle-like sharpness. Further inland these palms gave place to high cannas, and in the forest of tall trees, macaws, parrots, and parrakeets were numerous and noisy.

An expedition from Coliblanco was made to the base of the cinder cone of Turrialba, about 9000 feet. Here everything was different from what had been seen below.