

Some Wayne County, Michigan, Notes, 1905. — May 7. — Secured a Golden-crowned Kinglet (*Regulus satrapa*) afflicted with a tumorous growth, about the size and shape of a marble and completely surrounding the tarsus. It is many years since I observed a similar morbid growth on a bird. The other example was a Chipping Sparrow (*Spizella socialis*). This was also a globular enlargement of the tarsus about the size of a walnut, and so heavy that the bird could no longer rise from the ground. There was no distinctive difference in the two above cases, except the size, and I would not term the malady a malignant development, as it appears as an independent growth in no way directly affecting the vital forces. Indirectly, however, it probably causes death by assuming a size and weight that retards the bird from obtaining necessary nourishment.

May 21. — Secured an adult female American Redstart (*Setophaga ruticilla*) with abnormal development of mandible, which was bent upward along the side of the maxilla so that the tip projected slightly above the culmen ridge. There were no notches where the mandible and maxilla crossed, as seems to be the case when similar malformation occurs with hard-billed birds. This bird was in perfect physical condition and was conveying nest material when secured, thus showing that the abnormality was not an impediment to securing food or a mate.

June 6. — Made the acquaintance of a Catbird (*Galeoscoptes carolinensis*) that deserves a pension. When first noted she was attacking a large female moth, *Attacus cecropia*. When struck the moth would flutter its wings, which caused the catbird to jump back as if expecting a counter blow. She gradually became bolder, however, and finally conveyed the prize to her nest of young in a neighboring spruce. Shortly after she was dancing about a *Sphinx tiliæ*, but this I took away from her to adorn my 'den'! Finally I was near the nest when she brought a male *A. prometheus*.

June 11. — Caught a Green-crested Flycatcher (*Empidonax virescens*) on her nest containing three eggs. As a rule one does not even see this flycatcher on the nest. She almost invariably observes you first and quietly leaves. This nest was near the end of a horizontal elm branch and about two feet higher than I could reach. I pulled the branch down until I could get hold of her tail. She did not show much interest until I gave this appendage a gentle jerk. She then moved her head quickly from side to side and finally stretched out her neck and peered down at me, but did not leave until I repeated the operation several times. The eggs were infertile and entirely unspotted and everything suggested some form of physical debility. I did not really catch her but held her tail very gently so as not to deprive her of it as she started away, but from what I saw of her at close range, and her actions later, I think she was a very old bird, nesting a season beyond her time.

July 9. — Collected an adult male Golden-winged Warbler (*Helminthophila chrysoptera*) in slightly abnormal plumage. The uniform slate-gray of the upper parts, together with yellow of forehead and crown, were

somewhat obscured by olive green tips to the feathers, most pronounced on occiput and nape where the ground color is entirely concealed. This differs but slightly from the plumage of winter males but is not apparent in a series of early July specimens, including two taken on same date. Were this the only difference I would not deem it worthy of especial mention, as it may be a common plumage of the non-breeding bird, but there is a decided difference on the under parts. The breast is lemon yellow, contrasting sharply with the black of the throat and blending into yellowish white on the abdomen and gray on sides. The entire plumage is soft, silky and bright, while in normal examples taken at this season it is rough, worn and dull. The sperm ducts were the only evidence of sex I could discover on dissection. It was undoubtedly a non-breeding bird. — J. CLAIRE WOOD, *Detroit, Michigan.*

RECENT LITERATURE.

Stephens's 'Life Areas of California.'— In a paper¹ of eight pages, illustrated with a map, Mr. Stephens summarizes briefly the principal causes controlling the geographical distribution of life, and then proceeds to a detailed, but also brief, consideration of the faunal areas of California, which presents a greater diversity of physical conditions than any other well known region of similar size. With a latitudinal extent of 600 miles, it varies in altitude from below sea level to elevations of nearly 15,000 feet. The north and south trend of the high mountain ranges abstracts the moisture from the air as the winds from the sea pass over them, leaving beyond in the interior areas of great aridity, the annual rainfall in different parts of the State ranging from 80 inches in the northwestern part to 3 or 4 inches in the southeastern part. Under these varied conditions the life zones of the State range from the arctic to the subtropical, the former, however, occupying only limited areas on the higher mountain crests and the latter restricted to the bottom lands of the Colorado River.

Mr. Stephens's major divisions are as currently recognized, the special purpose of the paper being the definition of the minor faunal areas, or 'Faunas,' of which he provisionally defines 17. These are:

1. *Humboldt Fauna*,— a narrow coast belt extending from Oregon south to San Francisco Bay. Transition.
2. *Shasta Fauna*,— the region about Mount Shasta. Transition.
3. *Modoc Fauna*,— the northeastern part of the State, north of Honey Lake, and east of Mount Shasta. Transition.
4. *Sacramento Fauna*,— Sacramento-San Joaquin Valleys. Lower Austral.

¹ Life Areas of California. By Frank Stephens. Trans. San Diego [California] Society of Nat. Hist., Vol. I, No. 1, 1905, pp. 1-8, with map.