

Doctor Fitch, and most of those who have followed after him, have assured us that the bot emasculates the host. *Does it?* The evidence is far from convincing.

1. We have proof that a bot develops under the skin of all of our squirrels; that it often appears in the scrotum of the male; but is as often found in other parts of the body, and in the female as much as in the male.

2. No trace of the testes is discernible after the development of the grub. Why should there be? For at the season of all observations—August, September, and October—the testes are normally reduced to almost nothing and are even, as Bachman says (Vol. 1, p. 269), “drawn into the pelvis.”

3. There is no proof that the bot eats fibrous tissue, or anything but juices.

4. It is contrary to the known ways of evolution, that any species should develop a habit that would tend to cut off its own food supply.

5. The final proof has never yet been offered, namely—a male, apparently emasculated by the grub, kept over till next rutting season for observation. I strongly suspect that such males would surprise us by appearing on time, fully equipped, with two perfectly good, functioning testicles, that had been safely tucked away in their original nest inside the pelvis; evidencing that the only harm the bot-fly warble did, was the temporary drain while the host was carrying it. No one yet has reported one of these squirrels taken in the rutting season of its species, and obviously castrated.

A friend of mine, who had the ill-luck to develop a bot-warble in the calf of his leg, tells me that at times, when the creature was turning over, or in some way moving, the irritation was maddening.

The following species are known to be infected by the bot-fly or warble: gray-squirrel, foxsquirrel, redsquirrel, Eastern chipmunk, striped ground squirrel, Richardson ground squirrel, Franklin ground squirrel, least vole, housemouse, jack-rabbit, etc.

Perhaps some reader has made observations that will decide this question.

—Ernest Thompson Seton.

THE FLYING SQUIRREL AS A BIRD KILLER

On April 6, 1914, an adult female flying squirrel (*Glaucomys volans*) was captured with her two young and placed in a roomy cage in the workshop with a section of tree trunk containing a flicker's hole as a nest. Two or three days later a fine male yellow-bellied sapsucker was captured unhurt, and placed in the same cage where he made himself at home on the stump. I was greatly surprised the next morning to find his bones on the bottom of the cage, picked clean. This strong, hardy woodpecker in perfect health had been killed and eaten during the few hours of darkness, by the old mother flying squirrel, though she had other food in abundance. While pondering the tragedy visions of the many holes in the woods that had been found containing feathers and other remains of small birds came to mind, and I wondered if the beautiful and apparently inoffensive flying squirrels were responsible.

Small birds frequently take refuge in old woodpecker holes and natural cavities, where they are at the mercy of such a nocturnal wanderer. I am aware that flying squirrels have been accused of eating birds' eggs and young birds,

and while I have no positive proof that they prey on adult birds in a wild state, I have my suspicions; perhaps others have more conclusive evidence.

My friend, Mr. L. L. Pray, tells me that four flying squirrels in his possession ate prodigious quantities of "pinch bugs," and other beetles, as much as a pint a meal. The wings and legs were cut off, and the bodies eaten. They also displayed a fondness for raw meat, as do the equally mild appearing white footed mice.

—H. L. Stoddard.

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THE TECHNICAL NAMES OF TWO COLOBUS MONKEYS

Pennant, in his 'History of Quadrupeds' published in 1781, described two species of four-fingered African monkeys, based on specimens in the Leverian Museum, "brought over by Mr. Smeathman" from "Sierra Leone." The first of these he described and figured (l. c., p. 197, no. 110, pl. xxiv), as the "Full-bottom Monkey," in allusion to the "long, coarse, flowing hairs" of the head and shoulders, "like a full-bottomed periwig." His plate was poorly copied by Schreber, and published as Plate XD, legended as "*Simia Polycomos Zimmerm.*" but, as shown below, the plate could not have been issued till after the year 1780,¹ when Zimmermann in his 'Geographische Geschichte des Menschen und der vierfussigen Thiere' (II, 1780, p. 202, no. 105) described his "Der vierfingerige Peruquen-Affe," which he named "*Cebus Polykomos*," based exclusively on the "Full-bottom Monkey" of Pennant,² evidently from manuscript notes sent to him by Pennant before the publication of the 'History of Quadrupeds.'³ The publication of Zimmermann's name and description of the species thus antedates Pennant's by one year.⁴ This is the earliest technical designation for this species, usually cited as "*Simia polycomos* Schreber, 1775," the current modern equivalent being "*Colobus polycomus* (Schreber)."

The second of Pennant's two species of monkey here under consideration is his "Bay Monkey" (l. c., p. 198, no. 111), which he says likewise came from Sierra Leone and was based on Mr. Smeatham's specimens in the Leverian

¹ Sherborn (Proc. Zool. Soc. London, 1891, p. 590) gives the date of publication as probably about 1800.

² Zimmermann, in the third volume of his 'Geographische Geschichte' (1783, p. 170), in his list of African mammals, gave it as "Der vierfingerige afrikanische Affe, *Cercopith. Polykomos*."

³ Zimmermann thus acknowledges (l. c., p. 202) Pennant's favor: "Herr Pennant hat diese neue Affenart, die er in den vortreflichen Kabinette des Herrn Leever's (das reichste an Quadrupeden und Vögeln in Europe) fand, zuerst beschrieben." His citation of Pennant's work is "Full-bottom Monkey. Pennant History of Quadrupeds," without a reference to the page, which he always gives in citing Pennant's earlier 'Synopsis of Quadrupeds.'

⁴ Attention was first called in 1902 to the tenability of Zimmermann's name in my paper on "Zimmermann's 'Zoologiæ Geographicæ' and 'Geographische Geschichte' considered in their relation to Mammalian Nomenclature" (Bull. Amer. Mus. Nat. Hist., xvi, 1902, p. 22).