about three fourths of an inch long, of greatest diameter at the base and tapering to the apex. At the base of this peculiarly formed corolla there were three spurs about one third of the circumference of the corolla apart. The apex of the corolla terminated in a circular crown, which was orange-colored, like the palate in the ordinary flower. At the upper end of the tubular corolla, close to the orange-colored crown, there were three petal-like tips equally distant from one another.

J. B. Turner

THE INDIAN BEDBUG AND THE KALA AZAR DISEASE

It is not generally known by the entomologists of this country that the common bedbug of India is not *Cimex lectularius* Linnæus, but *Cimex rotundatus* Signoret (= *macrocephalus* Fieber). Captain W. S. Patton, of the Indian Medical Service, has recently published important papers on this insect, especially in regard to its pathogenic relations. In a brief note on the distribution of these two house-infesting bedbugs published in the *Indian Medical Gazette,* XLII., February, 1907, he points out the above-mentioned fact, and leads us to form the opinion that enough observations have not been made along that line. *Lectularius* is apparently distributed mainly throughout the North Temperate Zone, while *rotundatus* is tropical or subtropical; and though until very recently known from Burma only, it is now recorded by Dr. Patton as occurring throughout India, Assam, Malay, Aden, Mauritius and Réunion (Patton, *ibid.*) and still more recently (Patton, April 4, 1907, *in litt.*) it is recorded from St. Vincent, Sierra Leone and Porto Rico. I have specimens from Madras Presidency (South India), Réunion, Mauritius and St. Vincent, kindly sent by Dr. Patton.

These facts in regard to the distribution of the Indian bedbug become of economic importance in view of the now definite evidence which Patton presents that the dreaded kala azar disease of India is carried by that insect. This evidence is published as No. 27, new series, *Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India,* Calcutta, 1907, and is entitled 'Preliminary Report on the Development of the Leishman-Donovan Body in the Bedbug.' By the means of extensive experiments with bedbugs, it is fully demonstrated that these bodies, the cause of the disease, are ingested from patients and go through considerable development. In a postscript to this paper, Patton states that all of the intermediate stages of development and fully developed flagellates have since been found in the insect, and he states his belief that 'it is beyond all doubt that this insect transmits the disease.' Owing to conditions, it is impossible for him to test this directly by exposing healthy persons to the attack of infected bedbugs, but as it is, the evidence is complete and all of the facts point to the conclusion reached by Dr. Patton.

The establishment of this relation of the Indian bedbug to the transmission of a much-dreaded disease naturally directs our attention again to the pathogenic relations of our own common household pest, *Cimex lectularius* Linnæus, which is now under investigation by some of the medical profession.

A. Arsène Girault

Washington, D. C.,
May 25, 1907

## SPECIAL ARTICLES

THE SOLENODON OF SAN DOMINGO; ITS EXTERNAL CHARACTERS AND HABITS

A specimen of this rare and curious insectivorous mammal (*Solenodon paradoxus*) recently obtained by Mr. A. Hyatt Verrill in San Domingo and preserved in formol, has been submitted to me for study. Owing to the introduction of the mongoose and other causes this creature has become very rare and local. It is, without doubt, on the verge of extinction. At present, it is scarcely known in the great museums of Europe, and no specimen is known to be preserved in any American museum. A single skeleton is said to exist in the museum of Berlin. The only other *Solenodon* (*S. cubanus*), of eastern Cuba, is said to be nearly or quite extinct. It is a smaller and more hairy species, with shorter tail