



MINISTERIO DE FOMENTO
DIRECCION DEL RAMO
ENTOMÓLOGO DEL ESTADO

Lima, Perú,

January 12th, 1910.

Dear Doctor Lutz:

I wrote you just before leaving New York, and just before receiving your letter of Sept. 14th last. I arrived here Oct. 30th and have been hard at work on Hemichionaspis minor and its parasites ever since. This scale is very bad on cotton in the northern part of Peru. It seems to occur all over the world in the tropics, and its country of origin is as yet unknown. It is recorded from Brazil, but I know no specific localities. I enclose in this letter a small sample of cotton bark containing some of it, in case you are not familiar with it. Does it occur anywhere in your vicinity on cotton or other plant? It infests a great variety of plants. If you can mail me a small tight wooden box filled with it, I will be under many obligations. Or it can be put in tight pill-boxes and these packed in a wooden mailing box. I wish to obtain whatever species of parasites there may be in the material, and as these are very minute the box must be very tight to prevent their escape. Tin boxes will not do, because they hold the dampness and cause mildew which kills the parasites before they can complete their development. I am asking entomologists in various parts of the world to make me such sendings of H. minor, wherever it occurs, so that I may get a clue to its native country, for in the latter the parasites will be most numerous and effective. The native country once found, I wish to arrange for shipments of the parasites occurring there. I feel that it is very likely a native of South America, though Doctor Howard says that Japan is most likely its original home, and Professor Cockerell says Africa. I am writing to Japan, Ceylon, New Zealand, Trinidad, South Africa, Mexico, Panama, Chile and Argentine for material. *Also Java and the Philippines* After getting all this I will be able to judge pretty closely.



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The small white fluted male scales are most abundant in the sample I send you, but you will also see some of the gray non-cottony and larger female scales under or amongst them. I have reared two species of parasites from it here in Peru, that is to say from individuals on cotton; and have reared others from scale on other plants looking like *H. minor* and possibly the same, but have not had time to study the various forms as yet thoroughly.

Further than all this, I was told some years ago of a scale badly infesting cotton in the Argentine. It is extremely probable that it is *H. minor*. I have written my correspondent but have so far failed to hear from him. Can you give me the address of anyone in the Argentine to whom I may apply for information and material?

Thank you very much for allowing me to retain the specimen of *Dictenostylus semirufus*, and also for the other material that you sent me while I was in Massachusetts. I regard *Dictenostylus* as a link between the Mesembrinini and ~~the~~ some tribe of the Cestridae, possibly the Hypodermatini, but I would need to study the matter more fully before deciding which. I would hardly, I think, say any of the Cuterebrinae, though I do not know *Rogenhoferia*. The structure of the facial plate in *Dictenostylus* is very different from that of *Cuterebra* and *Dermatobia*. What is the structure of the facial plate in *Rogenhoferia dasypoda*? Is it like that of *Cuterebra*? If it is like that of *Dictenostylus* it is probably the latter genus.

There are plenty of bloodsucking flies here - *Simalium* is simply awful. But there are practically no *Culicidae* around Lima. They are present in large irrigated areas to the north of here. If you want some *Simalium*, also what *Tabanidae* I find, I will be very glad to send them to you. As to *Tachinidae*, I will not have much time to put on them until my return to Washington in May or June of next year, but I will do what I can with a few if you will send them.

H. aspidiotra is very close to
H. minor and possibly the same

Most sincerely yours,

C. H. T. Townsend