

Itinerary of Fruitfly Parasite Expedition to East Africa

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Leaving Honolulu on September 7, 1935, and New York on October 9, our entomological experiences on foreign soil began in London with a visit to the Farnham House Laboratory and its Director, Dr. Thompson. On the next day we made our way into the lugubrious basement of the British Museum, and met, among other entomologists, Sir Guy Marshall, Dr. C. Ferriere, and, of particular interest to us, the younger son of Dr. Perkins. This young man is said to resemble his father closely, both physically and in the promise of his already considerable entomological achievements.

In Hyeres, France, we spent a day at the European Parasite Laboratory of the U. S. Department of Agriculture and enjoyed the hospitality of Dr. Parker and his co-workers, Messrs. Smith and Sellers, all of whom seemed delighted to entertain visitors from home. The European Parasite Laboratory is probably the only dependency of the U. S. Government where 5 o'clock tea is regularly served as part of the daily routine.

The European quarter of Tanga, Tanganyika, in which we arrived on November 14, consists of a score or two of substantial concrete or frame buildings rather thinly scattered along two or three clean, wide streets. Fronting this area lies Tanga Bay, small but safe, and behind it extends the native quarter, forming a semi-circular fringe of native huts about a quarter mile in depth. A good part of the European quarter and most of the native area are thickly planted with old coconut trees, and the rest of the Tanga Plains, from the very edge of town and for about 35 miles inland, to the base of the East Usambara Mts., is practically all given to the cultivation of sisal.

Tanga itself was judged from the first an unfavorable location for our work, but the abolition of the A.A.A., under whose aegis we had been sent to Africa, forced us to remain there until late March of 1936. While still retaining Tanga as headquarters,

however, we visited for periods of various lengths several other areas of interest. These included the island Sultanate of Zanzibar, the East African Agricultural Research Station at Amani, on the rim of the East Usambara Mts., and the high plateau atop the West Usambara Mts., generally called Lushoto, from the name of the largest village of that region.

While many cultivated fruits were found around Tanga, and a great abundance and variety of them in Zanzibar, it was only in Amani that native fruits were found harboring fruit flies. One sapotaceous fruit, *Sersalisia usumbarensis*, yielded two species of fly, probably *Ceratitis capitata* and *punctata*, and two parasites, an Opiine and a *Dirhinus*. We reared a considerable number of the Opiines and made 3 small shipments of them by air; but none of these arrived in good shape even as far as Paris, from where Dr. Parker was to forward them by boat to New York.

On leaving Tanga, Mr. Krauss went to Nairobi, Kenya, and I to Arusha, a beautiful settlement, about 5,500 feet above sea level, on the coffee growing plateau that slopes from the great Meru Volcano. Remaining in Arusha for about a month and seeing no hope of entomological success, I then made my way to Uganda. There, in Kampala and Entebbe, the commercial and political capitals of the country, I became acquainted with a number of Government Officials, including Messrs. Hargreaves and Taylor of the Division of Entomology, who made it possible for me to remain 3 weeks at the Busingiro Forest Station and to spend an equal period of time in an unfortunate barren, but exceedingly interesting, tour of the Northern Province.

The last month and a half of our stay in Africa I spent partly with Mr. Krauss, who had remained most of the time in Nairobi, while I visited Uganda, and partly alone in a second visit to Arusha. Here, in Arusha, coffee had ripened during my absence; but, although I continuously kept a large quantity of the fruit in the laboratory, and upon my departure from Arusha carried about 50 pounds of it along with me, I did not succeed in rearing the parasites which the late Mr. Ritchie, one time Government Entomologist for Tanganyika, had previously reported from this area on *Ceratitis capitata* in coffee.

On June 24, 1936, having secured transportation thither in a

private automobile, I met Mr. Krauss in Mombassa, Kenya, and on that same date we sailed together on our return trip to New York. We carried with us a good quantity of fruit of several kinds, most of it from Nairobi and much of it containing parasitized fruit fly larvae; but none of the material we bred "en route" survived the long five weeks of our voyage, most of the parasites having emerged, very unfortunately, during the first week aboard.