hybrid strains of cinchora and will train experts in quinine production.

El Porvenir lies about 4,000 feet above the sea, with the heights of the extinct volcano, Tajmulco, Guatemala's highest mountain, towering another 10,000 feet above it. The plantation is only six miles off the new Pan-American highway.

With thousands of troops fighting in tropical areas where malaria is a constant threat, the needs for quinine are extensive.

STUDIES ON THE COMPARATIVE ATTRACTIVENESS OF 25-, 50- AND 100-WATT BULBS FOR PUERTO RICAN ANOPHELES.

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Although it often has been observed that more anophelines are attracted to light traps equipped with bulbs of greater light intensities than is the case when the standard 25-watt bulb is used, there seems to be no supporting experimental data on record. During the Fall of 1943 the writer operated three New Jersey type light traps with 25-, 50- and 100-watt bulbs simultaneously near Cucharillas swamp in Catano, Puerto Rico. These traps were approximately 150 feet apart and the bulbs were interchanged at intervals of 3 to 5 days to minimize the effect of location of any particular trap on the experiment. Mosquito collection data for ten nights, when all three traps appeared to be working properly, are given in Table I.

These data suggest that anophelines are attracted to light traps in numbers which are roughly proportional to the wattage of the bulb used. A comparison of the total numbers of female **Anopheles** (the numbers of males taken were not large enough to be significant) shows that the traps operated with 50-watt and 100-watt bulbs collected 2.6 and 4.0 times as many **A. albimanus** Wiedemann respectively as did the trap having a 25-watt bulb. Similarly the collections of female **A. vestitipennis** Dyer and Knab show that the traps with 50-watt and 100-watt bulbs collected 2.7 and 4.8 times as many females respectively as did the trap having a 25-watt bulb.

In the case of **A. grabhamii** Theobald the increase in the number of females collected at increased light intensities was not so marked. Although the trap equipped with a 50-watt bulb collected 1.8 times as many females as did the trap with the 25-watt bulb, the one having a 100-watt bulb collected only 1.9 times as many.

CONCLUSIONS: Although there was considerable variation on individual nights, in general these seems to be a definite tendency for traps with lights of 25, 50 and 100-watt intensities to attract females of **Anopheles albimanus** and **A. vestitipennis** in numbers which are approximately proportional to the wattage of the light bulb. In the case of **A. grabhamii** approximately twice as many females were collected with a trap equipped with a 50-watt bulb as with one having a 25-watt bulb, but greater numbers were not taken when a 100-watt bulb was used.

Table I.

VARIATIONS IN COLLECTIONS OF ANOPHELINE MOSQUITOES CATANO, PUERTO RICO, MADE WITH LIGHT TRAPS USING BULBS OF 25, 50, AND 100-WATTS.

Date	A. albimanus						A. grabhamii						A. vestitipennis					
	Male			Female			Male			Female			Male			Female		
	25w	50w	100w	25w	50w	100w	25w	50w	100w	25w	50w	100w	25w	50w	100w	25w	50w	100w
Oct. 24	0	1	1	6	24	84	0	0	2	2	8	7	1	1	2	6	6	26
Oct. 25	0	0	0	0	20	23	1	0	0	12	26	11	2	9	9	3	22	44
Oct. 26	0	0	1	2	20	22	0	1	2	9	21	14	7	10	11	3	14	41
Oct. 27	0	0	0	2	11	33	2	1	0	10	17	34	0	4	3	7	18	31
Oct. 28	0	0	0	7	6	16	0	0	0	13	23	22	0	2	5	5	28	31
Oct. 29	0	0	0	5	3	5	1	0	0	13	16	17	0	3	4	15	24	38
Oct. 30	0	1	0	6	1	10	0	0	0	9	8	15	1	8	4	4	20	23
Oct. 31	1	0	1	7	3	9	0	1	0	6	11	15	2	10	8	11	6	14
Nov. 4	1	1	1	7	19	4	0	0	0	10	17	12	1	1	3	0	4	4
Nov. 5	1	0	2	14	40	21	0	2	3	2	5	13	0	0	2	0	4	5
Totals	3	3	6	56	147	227	4	5	7	86	152	160	14	48	51	54	146	257