

LIFE HISTORY OF PAPILIO ZOLICAON.

BY ALICE M. JORDAN, NAPA, CAL.

Egg.—On September 2nd, 1893, it was found back of Napa College Laboratory, laid singly on the stem of the flower of wild anise. Nearly spherical, base slightly indented, smooth, bluish-white with grayish shade on one side. Diameter, 1.245 mm. It hatched September 5th, bursting the shell in halves; the shell was white.

First larval stage.—Head rounded, black and shining. Body is largest near the head, with short black hairs rising from two rows of reddish-brown tubercles on segments 2, 3, 4, 5, 6, 9, 10, 11 and 12 on each side of the centre of the dorsal surface, one row near the centre, the other quite low on the side. On segments 7 and 8 are a number of irregular-shaped white spots. Coloured dark brown, scent organs bluish-white.

September 6—Diameter, .65 mm.; length, 3.40 mm.

"	7	"	.80	"	"	3.90	"
"	8	"	.89	"	"	4.38	"
"	9	"	.98	"	"	4.75	"
"	11	"	1.05	"	"	5.90	"
"	12	"	1.08	"	"	6.00	"
"	13	"	1.20	"	"	6.40	"
"	14	"	1.45	"	"	6.85	"
"	15	"	1.58	"	"	6.89	"
"	18	"	1.64	"	"	7.30	"
"	19	"	1.69	"	"	7.40	"
"	20	"	1.70	"	"	7.44	"

Second larval stage.—Head slightly retracted under joint 2; rounded, greenish with a black v-shaped line, the lower part of the v at the upper part of the head, and a short black line in centre of v and two on each side at base. The tubercles on segments 2, 3, 4, 5, 6, 9, 10, 11 and 12 are more hairy. The irregular white spots on segments 7 and 8 are somewhat larger. Both the dorsal and ventral sides are brown.

September 21—Diameter, 1.98 mm.; length, 7.55 mm.

"	22	"	2.00	"	"	8.00	"
"	23	"	2.20	"	"	8.35	"
"	25	"	3.00	"	"	10.25	"
"	26	"	3.50	"	"	11.00	"
"	27	"	4.00	"	"	12.00	"
"	28	"	4.00	"	"	12.00	"