

Nor can the extent of the red spot at the base of the wings be correlated with some particular variation in shape of the superior appendages. Males with very similar appendages may differ considerably in the size and contour of the basal spot (*e. g.*, two males from Victoria, Tamaulipas, with appendages as in fig. 15, have the basal spot on the front wings reaching, in one case, one-half the distance to the nodus, in the other two-thirds of that distance, accompanied by differences in shape of the spot). Again, males with the basal red spot very similar in extent and shape may possess differently-shaped superior appendages (*e. g.*, a male from Victoria and one from Jojutla).

As to the absolute limit to which the red basal spot extends in the Mexican and Central-American specimens, the material at hand gives as the minimum one cell beyond the quadrilateral, with the costal and subcostal spaces uncoloured, for the front wings (Acambaro), and the apex of the quadrilateral for the hind wings (Acambaro); and as the maximum 14 cells beyond the quadrilateral ( $\cdot 87$  of the distance from base to nodus), costal and subcostal spaces coloured to fourth antecubital beyond the level of the apex of quadrilateral, for the front wings (Linares), and eleven cells beyond the quadrilateral ( $\cdot 8$  of the distance from base to nodus) for the hind wings (Linares). This minimum coincides with the minimum for specimens from the United States, so far as known to me; but the maximum is less than that of some Texan individuals in which the red attains the greatest extent to be found in any or all of the forms which are here referred to *H. americana*—viz., on the fore wings, on the costal margin to the third from the last antecubital, and on the hind margin to the level of the fourth *postcubital*; and on the hind wings, on the costal margin to the last antecubital, on the middle of the wing to the level of the second *postcubital* (M. C. Z.). It must not be supposed, however, that the amount of red increases from south to north in Mexico (*i. e.* towards Texas), the examples from Guerrero being very similar to those from Monterey in this respect. In one and the same locality, be it in Texas or in Mexico, a considerable variation in the extent of this spot occurs.

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between figg. 3 and 12: 1 ♂ Tepetlapa, '64; 2 ♂ Tepic, '73-'77. Intermediate between figg. 3 and 16: 1 ♂ Jojutla, '62; 2 ♂ Guadalajara, '73; 1 ♂ Tepetlapa, '67; 1 ♂ Monterey, '71. Intermediate between figg. 4 and 11: 1 ♂ Pike's Eddy, Pa., '57. Intermediate between figg. 4, 12, and 16: 1 ♂ Guadalajara, '68. Intermediate between figg. 4 and 16: 1 ♂ Elkhart, Indiana, '68. Intermediate between figg. 5 and 14: 1 ♂ Delaware Co., Pa., '54. Intermediate between figg. 7 and 13: 1 ♂ Denver, Colorado, no pter. on hind wings, '59. Intermediate between figg. 7 and 14: 2 ♂ Round Mt., Texas, '92-'81. Intermediate between figg. 11 and 14: 1 ♂ Bloomington, Ill., '6. Intermediate between figg. 12 and 14: 2 ♂ Pike's Eddy, Pa., '58. Intermediate between figg. 14 and 16: 1 ♂ Delaware Co., Pa., '64. Intermediate between figg. 15 and 16: 1 ♂ Texas, '69. Intermediate between figg. 16 and 17: 1 ♂ Tepic, '74; 1 ♂ Texas, '89; 1 ♂ Bloomington, Ill., '67.

The philosophical reader, as well as the systematist, may use these data as a commentary on the remarks of Walsh, 'Proceedings of the Entomological Society of Philadelphia,' ii. pp. 210 *et seq.*