NOTES ON *NEOPHASIA TERLOOTII*, BHR., FROM ARIZONA, WITH DESCRIPTION OF A NEW VARIETY.

BY OTTO C. POLING, QUINCY, ILL.

Neophasia Terlootii was described a great many years ago*, and the description being in Latin, it is not surprising that Dr. Strecker overlooked it in the hurry to publish his description of the female I sent him, which he supposed had not been previously described. It is a little surprising, however, that Dr. Skinner, who had the first opportunity to examine one of my examples of *Terlootii*, should have failed to recognize the generic characters of the insect until Dr. Strecker's description as *Neophasia epyaxa* was published.

The first female example of *Terlootii* takên, which is the type of "*Archonias lyceas*, Skinner" †, and is now in my collection, agrees with the type of *Neophasia epyaxa*, Strk., which I sent him after a careful comparison. These two specimens were taken in Cochise County, Arizona, to which locality I sent one of my regular collectors to spend the past season in studying the habits and collecting a series of examples of this interesting butterfly.

Of the series before me, most of the examples agree with the description of *Terlootii* male, and subsequent illustrations and descriptions of specimens sent out. There are, however, three females and one male which differ so much from the others as to well deserve a varietal name, and with the kind permission of my friend, Dr. William Barnes, I am allowed to use a most appropriate name, which he had intended to bestow on the species had it not been previously described, *Neophasia Terlootii*, var. *Princetonia*, n. var. Male differs from type in having the margin of hind wings washed with pale red on both surfaces, of a shade somewhat lighter than that of the female. The under surface is more heavily washed with red than the upper. There is a submarginal entire black band on both surfaces of hind wings, which is not quite so broad as in the female *menapia*, but the veins between this band and the outer margin are more heavily washed with black scales than in the latter species.

Female—From the types of *Neophasia epyaxa*, Strk., and "*Archonias lyceas*," Skinner, this form differs in having a much greater suffusion

*Trans. Am. Ent. Soc., Phil., II., 304 (1869).

†Ent. News, XI., 533, plate XIV. (Sept., 1900).

of black on both surfaces of the wings, and in the absence of the orange spots in outer marginal band of hind wing. There is also a large patch of orange in the centre of the cell.

[The Curator, on behalf of the Entomological Society of Ontario, desires to acknowledge with grateful thanks Mr. Poling's very acceptable gift of specimens of both sexes of this remarkably interesting butterfly—*Neophasia Terlootii*.]

CLASSIFICATION OF THE BUTTERFLIES.

BY A. R. GROTE, HILDESHEIM, GERMANY.

In the course of my already-published studies, the probabilities as to the homology of the last anal vein of the Papilionides primary have varied. From preparations of the pupal wing of the Hesperiaes, it has become clear that the fork to second anal at base is the remains of the third anal vein, which is irregular and more extended in the fore wing of the chrysalis and does not attain the outer margin. It is furcate and connected with the second anal in the pupal stage. On the other hand, the downwardly curved, short, last and free anal vein of the Papilionid primary cannot be homologous with this, as, indeed, I originally contended. This vein reaches the internal margin, and is probably a survival of the fourth anal. This fact points to a different origin for the two groups, which I have finally defined as follows:

- A. Butterflies having a short fourth anal vein on primaries, running downwardly free from base of wing to internal margin; on secondaries only one anal vein.....PAPILIONIDES.
- B. Butterflies having a short third anal vein on primaries, joining outwardly the second near base of wing (this fork sometimes wanting by reduction and always thinner than second anal or degenerate), fourth anal wanting, and having more than one anal vein on secondaries.....HESPERIAES.

In order to bring out the probable phylogeny in the classification, I accord superfamily value to the two divisions. The Papilionides include the three families: Parnassiidae, Teinopalpidæ and Papilionidæ, separable on neurational features, the first two appearing as specializations of the last in the order given. The Hesperiaes include not only the Lycenids, as indicated by Fabricius, but all the rest of the butterflies, of which I regard the Pierids and Blues as the more recent developments, while the Nymphalids and Skippers represent older types.