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## A NEW *LIMIA* FROM SAN DOMINGO

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Regan recognizes four species of Poey's genus *Limia* (of viviparous pœciliids) from the island of Hispaniola (Haiti and San Domingo), two of which (*L. nigrofasciata* and *L. arnoldi*) he describes as new from Haiti (1913, Proc. Zoöl. Soc. London, pp. 1014-1018). A lot of these little fish taken at Las Lagas, San Domingo, by G. K. Noble, September 24, 1922 are clearly referable to his *nigrofasciata*. Among them are certain females, however, with striking color differences which are constantly correlated with slight differences of structure that seem to be of specific significance. Although it is strange that two forms so closely related, yet distinct, should occur together, it seems to us best to consider them distinct rather than to suppose a dimorphic female for the species.

### ***Limia melanonotata*, new species**

A *Limia* related to *nigrofasciata* but differing in having 25-26 scales in the lateral series, a larger, higher, slightly more posterior anal with 10 rays, a narrower interorbital, and different coloration.

The type (No. 8220 A. M. N. H.), from Las Lagas, San Domingo, apparently an adult female, is 29 mm. in length to base of caudal; depth  $2\frac{2}{3}$  in length; head  $3\frac{1}{2}$ . The form is as in the female of *L. nigrofasciata*. The diameter of the eye equals the interorbital space and enters the length of the head  $2\frac{1}{2}$  times. Dorsal 9, originating midway between the base of the caudal and the posterior margin of the eye. Anal 10, originating below the fourth or fifth ray of the dorsal. Pectoral  $1\frac{1}{3}$  in head. Least depth of the caudal peduncle enters the length of head  $1\frac{3}{4}$  times. Scales 26 in longitudinal series. Coloration dull olivaceous, the scales dark edged. A series of black spots, one on a scale, down the fourth scale row, beginning a little anterior to the end of the appressed pectoral and dwindling in size to the base of the caudal. On the fifth scale row, a similar series of larger black spots begins at the insertion of the pectoral, the spots decrease abruptly over the front of the anal and thence dwindle in size barely reaching the caudal. There is a suggestion of a third series of spots on the next scale row and on the posterior half of the side a faint trace of vertical bars is seen. A very distinct small black spot is present at the base of the seventh and eighth dorsal rays. Excepting for this mark the fins are hyaline. The belly is dark and distended due to pregnancy.

Besides the type, we have 22 paratypes, collected at the same time and ranging from 19 to 30 mm. All are pregnant females. The specimens were taken, with upwards of 175 *L. nigrofasciata*, while hovering

over one of the fresh-water springs which come up in the shallow parts of the salt lake. Inasmuch as the ratio of males to females in the *nigrofasciata* taken is approximately 1 to 22, it is not very surprising that no males of this form were secured. We also find in the American Museum collections a single specimen 35 mm. to base of caudal with three smaller *nigrofasciata* taken at Manville, Haiti, February 1921 by F. E. Watson from a stream flowing into the brackish lake.

The colors vary somewhat. In a few specimens there is scarcely a trace of the lateral spots, while in others even the third row, hardly present in the type, is well developed. Superficially, the coloration resembles that of *L. vittata* from Cuba, but specimens of the same size as our species differ from the latter in having speckled fins, in lacking the dorsal spot, in the fainter dark edging of the scales, and in the shape of the lateral series of spots, which are dotted lines and not rows of rounded spots. The *vittata* which we have of this size are immature and none of the females are pregnant. *L. vittata* grows to a large size and adults resemble the present species but little. Although the color resemblance of *L. melanonotata* to the Cuban *L. vittata* probably explains doubtful records of *vittata* in San Domingo, Dr. Noble also obtained a number of *Limia* from La Bracita, San Domingo, in the Northern Coast Range (August 8) which, though readily separable from the *nigrofasciata* mentioned above, we find indistinguishable from *L. caudofasciata* of Jamaica and must perforce identify as such.

In describing his *Heterandria zonata* from San Domingo, Nichols (1915, Bull. Amer. Mus. Nat. Hist., XXXIV, pp. 91-92) failed to take account of the structure of its intromittant anal, which, aside from being long versus short, we find to be quite as in *Limia* with terminal antrorse hook, extremity protected by a hood, etc. It will therefore be best for the present, following Regan's classification, to consider it as yet another species of *Limia*, *L. zonata*. We are not satisfied, however, that this classification, based almost exclusively on these microscopic structures, brings out in all cases the true relationships of the many viviparous top-minnows.