

cause the line of enumeration passes low on the sides anteriorly, it is less sensitive to variation in scale size along the predorsal midline than is the usual predorsal scale count.

In *Lythrus* the systematic utility of scale counts is reduced by extensive intraspecific variation. In some instances, a single species shows variation spanning that within the whole subgenus. When species differ in scale numbers, the differences are usually only modal. Large samples were needed to elucidate all but the grossest intraspecific variation.

SQUAMATION.—Cursory observations indicate that all forms of *Lythrus* have the breast partly to completely covered with small, partially embedded scales. The predorsal midline is usually fully scaled, but occasionally there are narrow, naked interspaces between nonimbricate scales or naked patches of varying sizes. Because of difficulties in objective evaluation, no attempt was made to quantify breast or nape squamation.

Squamation tends to be reduced on the anterior dorsolateral part of the body. In its weakest form, this reduction is expressed as narrow imbrication of thin, partially embedded scales. Intermediate stages of reduction are characterized by scales on the upper anterior sides of the body being nonimbricate and isolated from one another by naked interspaces of varying sizes. Maximum reduction is characterized by the upper anterior sides of the body being naked. Size of the naked area varies; in extreme cases it is triangular in shape, with its base at the head and its apex extending posteriorly to just below the dorsal fin origin.

Five arbitrary classes of anterior dorsolateral scale reduction were distinguished and numbered as follows: (0) no reduction; scales fully (though weakly) imbricate, with no naked interspaces; this is the typical condition in *N. b. bellus*; (1) weak reduction; scales not fully imbricate, with narrow naked interspaces; (2) moderate reduction; scales not imbricate, with moderate naked interspaces; (3) strong reduction; scales few and scattered, with naked interspaces larger than average scale diameter; (4) naked; scales absent from an area of varying size on the anterior dorsolateral part of the body; this is the extreme condition, developed in some populations of *N. roseipinnis* and occasionally in *N. atrapiculus*. The symbols (+) and (-) were used with each of the five index values, indicating specimens that did not exactly conform to the typical condition for a given category. In the final analysis, index values were assigned arbitrary numerical values as follows: 0=0; 0(+)=0.3; 1(-)=0.7; 1=1; 1(+)=1.3; 2(-)=1.7; 2=2; 2(+)=2.3; 3(-)=2.7; 3=3; 3(+)=3.3; 4(-)=3.7; 4=4; 4(+)=4.3. The index of reduction was recorded only from the left side of specimens over 40 mm