



FIGURE 5.—Calculated regression lines for ontogenetic change in the total fin pigment index of breeding males of three members of the *roseipinnis* species complex. Statistical data for each line are presented elsewhere (Snelson, 1970: appendix).

of noteworthy ontogenetic change and reduced individual variation are reflected in a regression line with very little slope and a low residual variance (Fig. 5; Snelson, 1970: Appendix).

Breeding females lag in development of fin pigment (Table 13). Pigment representing the anal and pelvic fin bands is incompletely formed at small sizes, is added rapidly with increasing size, and the total pigment complement is complete or nearly so in large adults. Nevertheless at any given size females vary more than males in this index. Consequently the regression line for ontogenetic change in the total fin pigment index begins at a low value, increases rapidly, and levels off asymptotically; and there is more variation about the line than in males (Fig. 6; Snelson, 1970: Appendix).

BREEDING COLORATION

MALES.—Red color on fins may vary in intensity from pale to bright (probably depending on sexual readiness) and in hue from flame to wine red (depending on extent to which erythrophores are masked by melanin deposits). Membranes of dorsal fin washed with pale red. Erythrophores visible microscopically throughout most of fin but obscured in proximal and distal portions by heavy melanin deposits. Thus red color usually conspicuous to unaided eye only in zone through middle of fin. Red pigment lightly washed over distal one-third to one-half of anal and pelvic fin membranes. Distal melanin deposits obscure erythrophores, and color appears as poorly defined red bands proximal to black marginal band. Caudal fin membranes lightly washed with orange-red. Pectoral fin occasionally with light red wash bordering first ray.

Iris faintly washed with orange-red. Some specimens with pale reddish slash