

**Appearance and summer growth of young-of-the-year *Morone chrysops* and *Ictalurus punctatus* in the lower White River, Pike County, Indiana**

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**Abstract**

Collections of young-of-the-year white bass, *Morone chrysops*, and channel catfish, *Ictalurus punctatus*, were made approximately every two weeks in the summer of 1974 in the White River. Young-of-the-year white bass were first collected on June 23. Spawning apparently occurred in late May or early June. Summer growth can be expressed by the regression line:  $y = 16.37 + 0.48x$ ;  $r = 0.96$ . Young-of-the-year channel catfish were first collected on August 3. Spawning apparently occurred in July. Summer growth can be expressed by the regression line:  $y = 26.84 + 0.58x$ ;  $r = 0.56$ .

**Introduction**

From 1973-75, the fish fauna of the lower White River were routinely sampled as part of a study to monitor effects of thermal discharge on the resources of the river.<sup>1</sup> During the summer of 1974, young-of-the-year channel catfish and white bass were collected. A lack of published information exists concerning these two commercially important species in the White River. In this paper, I present data on appearance and summer growth of young-of-the-year of these two species.

**Materials and Methods**

All young fish were collected by seining (1/8 inch mesh 35 foot bag seine) in shallow water along sandbars in the White River above and below the IPALCO plant near Petersburg Pike County, Indiana. Seining was conducted approximately every two weeks beginning June 23 when water levels lowered (water levels were high in early June) until September 7. The standard lengths (SL) of the young were measured to the nearest 0.1 mm. The correlation coefficient ( $r$ ) and regression line of least squares indicating growth was calculated for each species.

**Results and Discussion**

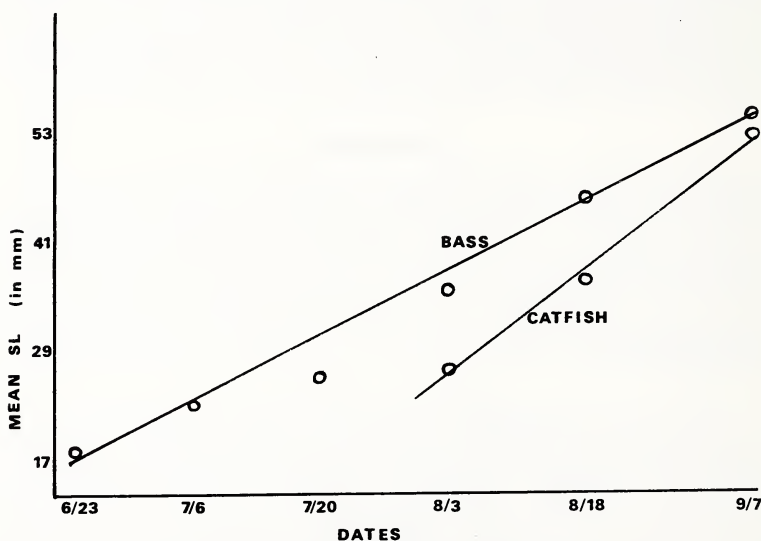
On June 23, 1974, a spawn of young-of-the-year white bass was collected (avg. SL = 17.5 mm, N = 13) indicating late May or early June spawning. In Shafer Lake, Indiana, Riggs (2) reports that spawning occurred during the first two weeks of June. Subsequent collections of the young revealed their summer growth (Table 1, Fig. 1). The regression line of least squares is:  $y = 16.37 + 0.48x$ ;  $r = 0.96$ .

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TABLE 1. Sample size, Mean, Standard deviation and range of standard lengths (mm) of *Morone chrysops* and *Ictalurus punctatus* for each collecting date.

| 1974    | <i>Morone chrysops</i> |                |             | <i>Ictalurus punctatus</i> |                |             |
|---------|------------------------|----------------|-------------|----------------------------|----------------|-------------|
|         | sample size            | Mean $\pm$ SD  | range       | sample size                | Mean $\pm$ SD  | range       |
| 23 June | 13                     | 17.5 $\pm$ 1.7 | 14.0 - 20.5 |                            |                |             |
| 6 July  | 6                      | 22.2 $\pm$ 4.5 | 15.4 - 28.0 |                            |                |             |
| 20 July | 1                      | 25.7           |             |                            |                |             |
| 3 Aug   | 9                      | 35.0 $\pm$ 2.9 | 31.0 - 39.8 | 64                         | 26.9 $\pm$ 6.1 | 16.3 - 46.0 |
| 18 Aug  | 11                     | 44.9 $\pm$ 4.4 | 37.0 - 51.1 | 82                         | 36.1 $\pm$ 6.8 | 22.5 - 59.0 |
| 7 Sept  | 2                      | 54.0 $\pm$ 7.8 | 48.5 - 59.6 | 9                          | 51.8 $\pm$ 7.1 | 39.3 - 60.3 |

FIGURE 1. Growth of *Morone chrysops* (bass) and *Ictalurus punctatus* (catfish) during the summer of 1974.

Likewise, on August 3, the first young-of-the-year channel catfish appeared (avg. SL = 26.9 mm, N = 64). Spawning apparently occurred in July. In Kansas, Cross (1) reports spawning from late May to early July. Subsequent collections showed summer growth of the young (Table 1, Fig. 1). The regression line is:  $y = 26.84 + 0.58x$ ;  $r = 0.56$ .

#### Literature Cited

- CROSS, F. B. 1967. Handbook of fishes of Kansas, Mus. Nat. Hist. Univ. Kansas Misc. Publ. 45:1-357.
- RIGGS, C. D. 1955. Reproduction of the White Bass, *Morone chrysops*. Invest. Ind. Lakes. 4:87-110.