POPULATION CHARACTERISTICS
OF LOTIC ORANGESPOTTED
SUNFISH IN SOUTH DAKOTA

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ABSTRACT

Growth and relative condition of fish populations can provide insight into overall fish community characteristics. However, few studies have investigated population characteristics of warmwater lotic centrarchids. More specifically, no research to date has been conducted on population characteristics of orangespotted sunfish *Lepomis humilis* in South Dakota streams. Orangespotted sunfish were collected with a bag seine (15.3-m long, 6.4-mm bar mesh) from two geographically distinct river basins and their associated streams/tributaries in eastern (Big Sioux River basin) and western (Cheyenne River basin) South Dakota. All orangespotted sunfish were counted, measured to the nearest mm total length, and weighed to the nearest 0.1g. After collection, sagittal otoliths were removed to analyze age and growth. Relative condition factors were calculated to describe the overall well-being of the populations. The 54 orangespotted sunfish collected from the Big Sioux River basin in eastern South Dakota had a mean length of 54 (SE = 1.57) mm, included relative condition values that ranged from 0.77-1.35, and exhibited relatively consistent recruitment up to age 4. The 73 orangespotted sunfish sampled from the Cheyenne River basin in western South Dakota had a mean length of 58 (SE = 1.04) mm, exhibited relative condition values that ranged from 0.72-1.19, and consistent recruitment through age 5. This study provides baseline data from two diverse regions with a wide array of biotic and abiotic conditions that may be valuable for future comparative studies conducted on orangespotted sunfish populations in the upper Midwest.