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Growth and Appetite of Juvenile Lake sturgeon *Acipenser fulvescens*

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Abstract.–Growth rates of juvenile lake sturgeon (initial weight 8 to 9 g, temperature 17.5° C), fed twice a day on brown worms for 56 days increased from -1.5% BW/d (% body wet weight/day) at zero ration to 2.6% BW/d at a ration of 13.2% BW/d. Maintenance ration was 1.6% BW/d. Fish fed larger rations had higher energy densities and lower water content. Appetite (average volitional daily food consumption) was compared for lake sturgeon initially weighing 6.3 g fed once and twice a day. Appetite was 12.8±1.6% BW/d (n=36) for fish fed twice daily compared to 7.4±0.8% BW/d (n=36) of fish fed once a day. Growth rates and food consumption in single feedings per day averaged 1.8±0.2% BW/d and 9.4±2.2% BW/d respectively, and were independent of weight for lake sturgeon weighing from 10 to 1322 g. These growth patterns are similar to other fish species. The most prominent feature of lake sturgeon growth was variation in daily food consumption, by as much as 15-fold for fish fed twice a day. Daily food consumption was correlated with previous consumption history, but mechanisms causing the effect could not be determined. The ability to gorge may be important for a species feeding on patchy prey. Management of lake sturgeon would be facilitated by selecting larger fish for stocking.