Insider

Toothy Tidbits

Plankton-Eating Walleyes

A selection of pertinent science topics as seen by staff fishery biologist Steve Quinn.

Canadian biologists Nick Baccante and Brendan Anderson have been studying an unusual walleye population in British Columbia's Charlie Lake. Like many other BC lakes, Charlie was stocked with walleyes from Ontario in the 1950s. The lake has developed an excellent, naturally reproducing population of walleyes, yielding angler catch rates of at least one walleye per hour, a rare statistic for the world's best walleye waters, where one walleye per three hours of fishing is considered good fishing.

But more surprising is the Charlie Lake walleye diet. "These walleyes feed solely on plankton throughout their entire life cycles," Baccante reports, "despite the presence of white suckers, perch, and minnows. While Charlie Lake walleyes grow slowly and appear to max out at 16 to 18 inches long, they live as long as fish in neighboring lakes that feed on fish. And they exist at far higher densities than fish-eating populations. Yet there's no genetic difference at all," he says.

The biologists note that these plankton-grazing walleyes have challenged traditional theories of walleye prey selection, as hatchling walleye typically start with a plankton diet and switch to small fish within months. "These fish stay with an extremely abundant food source, foregoing what we'd considered a genetically programmed switch to larger prey.

"By avoiding the preyfish stage, however, Charlie Lake walleyes are converting food much more efficiently, as they're skipping a step in the food chain," Baccante says. "Many of the largest animals (cattle, elephants, whales) feed on primary production."

Considering the ramifications of this finding, the biologists noted that in the past, many lakes with dense plankton blooms have not been stocked with walleye because they didn't contain preyfish. The Charlie Lake situation suggests they might produce better fishing than lakes rich in preyfish.

Gord Pyzer

NEW REGS FOR COLORADO

In Colorado, the epicenter of western walleye fishing, this species ranks second in popularity behind trout. The Colorado Wildlife Commission has responded to angler requests for stricter length limits to foster more large fish. Regulations for 2006 should improve the size structures of populations and also boost walleye egg collections for hatchery production and stocking.

In reservoirs used for broodfish production, including Chatfield, Cherry Creek, and Pueblo, an 18-inch minimum-length limit is in effect. Pueblo's daily creel limit increases to 5, matching that of other walleye waters. Another category of "Quality Lakes" operates under a 15-inch minimum-length limit, with only one fish over 21 inches allowed per day. This group includes famous walleye waters like Nee Noshe, John Martin, Nee Gronda, Adobe Creek, and Trinidad, plus Bonny and Flager reservoirs on the Republican River.