Ducks and Snails and How the Future Depends on Each

According to Ducks Unlimited, by mid December 85% of adult mallards and 50% of immature mallards have "pair-bonded". In late winter, these breeding pairs seek out protected roosting areas where they can "loaf". This loafing area is selected by ducks in order to allow them to conserve energy, be less susceptible to predation, and find adequate forage. It's a very critical time period for ducks. Before they begin the long migration back to the nesting grounds in the upper Midwest of the United States or southern Canada, they have to store enough energy and nutrients to ensure their survival as well as the survival of the next generation of their species.

During January and early February, female ducks have a very high metabolic demand for calcium. The reason? Calcium is obviously a primary component utilized in the formation of their eggshells. Without it, successful reproduction of a waterfowl species is doomed. So where do female ducks in Arkansas and Louisiana obtain adequate amounts of calcium needed to adequately produce shell material and perpetuate the species? Primarily, it's obtained from the small, freshwater aquatic snail populations commonly found in the brakes, marshes, bayous, and oxbows ducks are utilizing during this time. These tiny snails are clinging to and foraging on the various aquatic plants that are present in these loafing and foraging areas. Ducks may also consume "fingernail" clams and an occasional crayfish when they can, as these species are also very high in calcium content. So for several weeks, individual female ducks are consuming, digesting, and converting hundreds of these small bivalves that eventually end up as eggshell material lying across the prairie pothole region.

For those of us that are deer hunters and more ecologically minded, we can take it a step further. An interesting question to investigate would be, "How many pounds of calcium do the millions of female ducks move from southern ecosystems onto the prairie-pothole region each year?" The fertile and high calcium content spring and summer vegetation growing from these enriched soils in the Midwestern United States around duck nesting areas undoubtedly ends up being consumed by antler-growing bucks. We all realize that calcium is a much-needed nutrient for annual antler growth.

These deer hunting sportsmen in the Midwest might wonder how much of the calcium making up a given bucks antlers originated from "Arkansas" snails? When you factor in Ducks Unlimited reported the 2007 continental breeding population was estimated to be 41.2 million birds for the 10 most common duck species, and the Mississippi flyway is a significant percentage of that total, there is very little doubt a large number of southern clam and snail shells eventually find themselves transported and deposited a lot further north.

As with all wildlife species, everything is a function of habitat. The better the living conditions are, the better a species thrives. It is absolutely critical to have the best habitats possible year in and year out, and wintering habitat for waterfowl is certainly no exception.

Consequently, a diverse aquatic wetland or seasonally flooded area is a very critical habitat component for ducks. What could this habitat look like? Generally speaking, a stand of bottomland oaks that seasonally floods and produces small acorns (e.g., Nuttall) is a good start. But to enhance this area, removing around 30-50% of the tress would allow sunlight to hit the ground and stimulate a diverse emergence of semi-aquatic and aquatic plant species. From these, a smorgasbord of weedy seeds would add diversity to duck diets as well as provide habitat for thousands of clams and snails. If you have this type of habitat and/or can enhance and maintain an existing habitat, the ducks will eventually find it and use it religiously. Some people may see

areas like this and view them as a “weedy aquatic mess”, but to a duck it’s a giant buffet full of acorns, vegetation, and seeds all topped off with the delicacy of snails and clams!