[From Summer 2002]

Identifying Shorebirds by Their Eating Habits

This is a 1990 article written by Dr. Tom Dick. Dick was an early member of CNHA, was the originator of the CNHA newsletter, and was responsible for the name Piping Plover.

Assume you could buy a kit to make your own bird. The kit comes complete with feathers, assorted leg lengths, various bill designs and eye sizes. My first project is to make a bird that sees its prey, runs quickly and stabs it for ingestion; obviously this bird will need good eyes (large), a short strong bill and some speed. Well, I just made a plover. Another design is a bird that spends all its time stitching up and down in the sand. This bird doesn't need sensitive eyes but rather a sensitive bill. I may have made a sandpiper. If the sandpiper is given longer legs to allow for deeper wading, and then a specialized bill, long and upturned to it can swing its bill from side to side for feeding, it becomes an avocet; if down-curved a whimbrel. Let's examine some of Chincoteague's shorebirds by looking at how physical structure influences feeding behavior and feeding locations.

Oystercatchers, although commonly seen feeding on oysters, eat a variety of other foods, especially mussels. Their tough, long, reinforced bill allows for chiseling and hammering. They either break the oyster shell with a series of rapid, well-placed blows or they wait till the oysters are feeding and ram their bill quickly through the open valve, severing the adductor muscle. European oystercatchers use one or the other technique, but no single bird learns both.

Another bird preferring hard substrate (rocks, oysters, etc.) is the Ruddy Turnstone. This industrious bird, with its short, sharp bill, spends all its time chiseling and excavating. It searches for prey by turning over shells, hammering holes in jellyfish for gonads, or feeds on maggots and small coquina clams. In May, look for the Ruddy Turnstone on bayside beaches excavating shallow holes in the sand for horseshoe crab eggs.

Equipped with short, strong bills and large eyes, Plovers tilt their heads from side to side and run quickly, seizing their prey. Piping Plovers, a federally endangered species and the reason the southern end of Assateague Island is closed during their nesting season, feed on insects found within the seaweed deposited by spring tides. Another plover, the Semipalmated, is found along wet sand and mud where it stabs polycheate worms with its slender bill. Wilson's Plover, a slightly more southern species, is found irregularly through the summer. It has a slightly heavier bill which enables it to feed on small crabs. The wintering Black-bellied Plover, with its much heavier bill, can feed on small clams. Black-bellied Plovers are found frequently feeding with f locks of winter Dunlins on moist sand.

Sandpipers feed by pecking, stitching and probing. Sensory organs in the bill allow them to detect prey within the sand and to grasp by opening the bill tip without opening the bill base. Additional leg length allows for wading into deeper water, such as with the Lesser Yellowlegs, Greater Yellowlegs and Willet. The Lesser Yellowlegs picks food off the substrate surface while the Greater Yellowlegs catches fast moving minnows. Willetts with their long legs dance across receding waves, plucking up mole crabs. Short legs confine the "peep" sandpipers to simpler habitats such as wet sand. Here the peeps such as Lent, Western and Semipalmated Sandpipers, spend most of their time. With short legs, exceptions exist and certainly the Sanderling, with frenzied sprints to and from breaking waves, is one. The Sanderling feeds on amphipods, small shrimp and coquina clams.

Sandpipers are well known for various bill designs; some, such as dowitchers, are long and straight while others are down-curved as with the Whimbrel or up-curved like Godwits. Each design gives a certain mechanical advantage for removing a particular prey from its burrow. Straight bills of Dowitchers are well suited with stitching movements for removing crustaceans, mollusks and

marine worms. The Whimbrel's down-curved bill allows easier removal of crabs from their burrows. Upturned bills give Godwits an advantage when removing burrowing nematodes.

The next time you're watching shorebirds, look at the way they're put together and watch how and where they feed. Certainly, this is one way of separating and learning how to better identify these birds.