

AGING WILSON'S PLOVERS BY APPEARANCE AND BEHAVIOR

by Pat Leary, Timucuan and Nature Coast Shorebird Partnerships

The following is a useful key for determining the age of Wilson's Plover chicks by appearance and behavior. This guide highlights aging tips and common responses to disturbance at different phases of chick development. Knowing the chicks' age, and being able to identify defense behaviors, can help managers better plan for appropriate protections.

Caveats: Wilson's Plover response behavior is dynamic and dependent on the frequency and intensity of disturbances, the age of chicks, the exposure of the habitat, the character of the shoreline, proximity of covert or refuge, tidal phase and presence or absence of multiple stimuli and other factors. These are personal observations for specific sites in Northeast Florida and may not be applicable statewide.



Hatch day: Upon hatching, WIPL chicks are downy and approximately the size of the end of your thumb.

The following observations of Wilson's Plover (WIPL) response to human disturbances are based on multi-season observations at Ft. Clinch State Park and a few other regional coastal sites. From early in the nesting season through fledging of chicks, the plovers will engage in a broad suite of behaviors based on the particular phase of the nesting cycle. Here I will focus on the incubation through chick-rearing phase.

Adult nesting response: Males typically "stand guard" of incubating females within 50 meters (yards) of a scrape/clutch site, usually on the high or mid beach directly in front of the incubating mate. Upon approach by pedestrians, males will become alert and emit an alarm call. Females (or the incubating mate) will sit tight on the nest (often hunkered very low to avoid detection) as long as the threat does not directly approach the nest. If directly approached, the incubating bird will walk away from the nest and might even exhibit distraction displays (broken wing, tail dragging).



1-2 days old: Chicks look like brown and white cotton balls. They typically hunker down in cord grass and Sargasso wrack on the open beach.

Hatch – first days: One or both adults will emit alarm calls to warn chicks of a threat within 100 meters. If you are driving an ATV, ORV, or another vehicle, you are unlikely to hear these alarm calls, so please be highly attentive to adults standing guard over concealed chicks within your path. Days-old chicks will "freeze in place" or move a short distance to cover, where they can hunker down and become virtually invisible against the substrate (see image below of chick hidden in wrack). In locations with heavy pedestrian or vehicular traffic, this is the most dangerous period for chicks, as they rely on their cryptic appearance to "hide in plain sight" instead of fleeing the danger.



Days-old chick taking cover in wrack. Camouflage helps chicks avoid predators, but increases their risk of being accidentally trampled or run over by people.

If a threat nears the concealed chicks, the adults engage in distraction displays and attempt to lead the threat away from the chicks. The closer the threat approaches, the more exaggerated the adults' display and the harsher their vocalizations become. Adults will even fly up directly in front of pedestrians to distract them away from their chicks. However, responses to vehicles are far less demonstrative, and adults may stand away from their chicks and out of the path of an approaching vehicle.



8 days old: Chicks are very mobile and look like a cotton ball on stick legs.

Week-old chicks: At this age, chicks will run (instead of freeze) and seek cover when a threat approaches. The guarding adult will emit alarm calls to warn the chicks of an approaching threat. If on the open, lower beach, the adults will lead the chicks up the beach to the wrack line or fore dune habitat, in a direction away from the approaching threat.

2nd week to fledging: The chicks develop very slowly and always under the protection of an adult, typically the male. After the first week of age, unfledged chicks will run from a perceived threat and typically abandon the open beach for the wrack line or vegetated habitat. Separation from the adult is the greatest danger at this age. As they develop, the chicks begin to forage more independently and range further from the guarding adult. If threats approach from multiple directions, chicks can be separated and become vulnerable to ghost crabs, crows, gulls and other natural predators.

Frequency of threats and/or degree of recreational pressure appears to affect adult and chick response in some locations. This season at Ft. Clinch, there is an adult male with a three chick brood that is demonstrating unusual tolerance for pedestrian approach. In past seasons, when adults led their chicks down to the low beach to forage, they would become alarmed and compel the chicks to return to the high beach or back beach habitat whenever pedestrians appeared on the shore. This particular male simply stands guard and does not lead his brood out of the foraging habitat when pedestrians appear on the high beach. I have not had opportunity to observe what occurs when pedestrians directly approach the chicks while they forage on the low beach habitat. It can be dangerous and disruptive to the birds when pedestrians approach from multiple directions and essentially “trap” the chicks between them with no avenue of escape. During my most recent survey, two of the chicks ran into the rock groins to hide when a Fish Crow flew overhead. The chicks remained within the rocks well after the crow passed and, even after emerging, they remained stationary for a protracted period. A third chick, out of view, apparently hunkered down on the substrate, as I did not observe it emerge from the rocks.



17 days old: Feather growth is developing at this age, with gaps around the neck.

Where dense wrack lines form along shorelines, vehicle operators must be extremely attentive of chicks foraging in or near such structure. I have observed chicks running before an approaching ORV that was driving between two parallel lines of wrack. The “trapped” chicks panicked, darting from one side to another until finally running through one side of wrack to avoid the vehicle.



30 days old: Feathers are well-developed at this stage, but the neck is last to fill in. Chick has “bob-tailed” profile.

Near-fledge to fledge: As the chicks near fledging, they tend to avoid threats by running along the shore. They are quite mobile at this age and can run as fast as adults. If approached from opposite directions on the low shore, they will move up the beach to the wrack line or vegetation. Recently-fledged chicks are weak flyers and will only fly short distances along the shore, so they could easily tire if chased or flushed repeatedly.

These behaviors make plover chicks extremely vulnerable on open beaches. Needless to say, dogs are a huge threat to plover chicks. In my experience, very few beach walkers/recreationists ever become aware of WIPL plover chicks within their view on the beach. Even chicks foraging on the low beach directly in front of beach walkers are often undetected. I suspect much of this is attributable to lack of awareness that birds nest on the beach. Or, perhaps because of their precocious behavior, unfledged chicks are mistaken for mature shorebirds.

Unfortunately, today's numerous beach recreationists are restricting WIPL chicks' access and use of low beach habitats in many locations. My observations reveal that adult plovers frequently lead their chicks into intertidal habitats to forage, only to be forced out of the areas when recreationists appear. The more popular the shore and the more frequent the recreational activity, the less accessible it becomes to the plovers. When low tide occurs at mid-day, the plovers may be prevented access entirely, and if alternative foraging habitat is lacking or deficient, it could have adverse impacts on fledging success.

Smaller chicks glean a great deal of invertebrate prey such as spiders and insects off of vegetation, but as the chicks develop, they become more dependent on crustaceans and invert prey in the mid and lower beach. Consequently, undisturbed access to the mid and lower beach becomes increasingly important as the chicks get older.



Fledged juvenile: *Fledged chicks are the same size as adults, but have strong feather edging (scaling), especially on crown and mantle. The bobbed tail is another distinction between recent fledges and adults.*

About the author and photographer: *Pat Leary is a contributing member of the Nature Coast and Timucuan Shorebird Partnerships, American Oystercatcher and Red Knot Working Groups, and the Piping Plover research collaborative. As a long time volunteer, he collects data on multiple species all seasons of the year and contracts field services for various research entities and agencies.*