

Summer 2012 Piping Plover Observations Summary

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This paper is a summary of observations made between May 15th 2012, and August 8th 2012 on the shorebird Piping Plover (*Charadrius melodus*). These observations were made exclusively on Long Island in the Apostle Islands National Park in Bayfield, Wisconsin by Sumner Matteson (15 May, 15 June) of the Wisconsin DNR and by Plover Monitors Cooper Crose, Chris Beyett, and Paul Wilcox. The Great Lakes population of the Piping Plover is currently listed as endangered by the Federal Government. The observations made are part of an ongoing study funded by the US Fish and Wildlife Service in an effort to monitor the nesting pairs and the population growth of the species.

At Long Island, when a nest is found, a small box made of wire fencing, called a mini enclosure, or mini, is placed over the nest to protect from predators. When the final egg is laid, usually four, a larger enclosure, called a full enclosure, is placed around the nest, constructed of wire fencing large enough for a plover to pass through, but small enough to keep out predators. Psychological fencing consisting of signs, twine, and flagging, is used to close off the beach to public use to further protect the nesting birds. Once the chicks have hatched, they are then banded and record before they reach 14 days old.

Between June 4th 2012, and August 9, 2012, I, Cooper Crose, along with monitors Chris Beyett and Paul Wilcox, observed a total of seven nests, and four successful nests. Of these four nests, three were renests, which were washed out from storms and surf. There were nine adults observed in this time. The four nesting pairs are listed below, and then a lone male plover, banded X, O/G, O,- was observed periodically from June 27th onward. Of the four successful nests, four chicks were fledged, and four more were unable to fly and still foraging with the fathers at the time of this writing. Another three chicks were fledged from an unknown nest, which I have listed below as Nest Eight.

Nest One (Failure)

N 46.71264, W90.76486

This nest was a failure. The nest was first observed on May 19th by Paul Wilcox. The last recorded observation was May 26th. At that time there were four eggs being incubated. This nest was then washed out by a severe thunderstorm and large surf.

Nest Two (Successful)

N 46.71341 W 90.76608

Male: X,O:-,O

Female: X,O:O,-

3 Offspring: X,G:O,-

This nest was first observed on May 30th with three eggs by Paul Wilcox. The full enclosure was placed on June 1st, where there were 4 eggs observed. On June 27th, three chicks were hatched and observed. A fourth chick was never observed, so details on the last egg are

unknown. These chicks were then banded on July 10th by Sumner Matteson. On July 17th, the adult female was observed foraging very far from the nesting ground and the rest of the family. She did not return to the family for the next three days, and was not observed after July 20th. The first flight attempt by a chick was July 19th, with the other two chicks following in the next few days. The male was last observed on July 29th. Since then, two of the three chicks have been observed foraging with the chick from nest three, or foraging with Sanderlings (*Calidris alba*). The third chick left around the same time as the father.

Nest Three (Successful)

N 46.71261, W 90.76517

Male: X,G/O: O,-

Female: Unbanded

1 Offspring: X,G:O,O

This nest was discovered by Cooper Crose on June 6th 2012 with three eggs being incubated. On July 7th the full enclosure was set up around the nest, and a fourth egg was later laid. One chick hatched July 3rd, 2012. There was a large storm on July 4th, and the three other eggs never hatched. The chick was banded on July 10th by Sumner Matteson and the unhatched eggs were collected by US Fish and Wildlife. The female was last spotted around the male and chick on July 13th. The male was last observed near the chick on July 29th. The chick was last observed on July 31st, and not observed again until August 8th, where it was foraging with fledged plovers from nest two.

Nest Four (Failure)

N 46.70133, W 90.74937

Male: X,Y:Of,B/B

Female: O,-:X,O/G

This nest was a failure due to weather. It was first observed by Cooper Crose and Sumner Matteson on June 15th with one egg in the nest. Upon observation on June 21st, a storm from the previous night had washed out the nest. No adults were observed in the area, and there were no eggs in the mini. The wash line on the beach was about 10 meters beyond the location of the mini.

Nest Five (Failure)

Male: Unbanded

Female: O,b:X,b

This nest was a failure due to weather. It was first observed June 17th with one egg by Chris Beyett. On June 21st, there were no birds observed near the mini, and the single egg had been washed out. Debris from the lake surge produced by the storm had been piled up on the lake ward side of the mini enclosure, and the wash line was well beyond the location of the nest.

Nest Six (Successful)

N 46.70219, W 90.75086

Male: Unbanded

Female: O,b:X,b

2 Offspring: X,-:O,G/O/G

This nest was a renest of Nest Five, and first discovered by Chris Beyett on June 25th 2012 with one egg. The full exclosure was placed on July 2nd in anticipation of July 4th beach traffic. Three chicks were observed on July 26th, and the 4th was observed on July 28th. On July 29th, there was a storm during the evening and night, and on the 30th, only two chicks were observed. July 29th was also the last day the female was observed. The two chicks were banded on August 2nd by Sumner Matteson. The last day of observations on Long Island was August 7th 2012. As of writing this, the chicks were still unable to fly, but the male was still around and the chicks were foraging and looking healthy.

Nest Seven (Successful)

N 46.70844, W 90.76040

Male: X,Y:Of,B/B

Female: O,-:X,O/G

2 Offspring: X,G:O,G/O/G and O,G/O/G:X,G

This nest was a renest of Nest Four, and discovered with two eggs on June 26th 2012 by Cooper Crose. This renest was near the top of a sand dune, in the beach grass, as compared to the original nest being on the beach flat. The full exclosure was established on July 2nd, in anticipation of the 4th of July traffic. It was also noticed that the 4th egg was laid this day. On July 16th, it was noticed that an egg had disappeared from the nest, and of the three remaining, one appeared to be discolored and irregularly shaped. Two chicks were observed on July 24th, with the irregular egg still in the nest. On July 26th, the irregular egg hatched a plover chick, but this chick was not observed after July 30th. The female was also last observed on July 30th, and not observed since then. The two chicks were banded successfully by Sumner Matteson on August 2nd. The last observation was on August 8th 2012, where both chicks were foraging successfully, and the male was watching over the chicks nearby. The chicks were unable to fly at that time.

Nest Eight

Male: Unknown

Female: Unknown

Three offspring: Unbanded

On July 17th 2012, three unbanded plover chicks were observed by Cooper Crose near the southern most exclosure on Long Island. These three chicks stuck together and foraged very closely, so it was assumed they were from the same clutch. They were able to fly, so it was also assumed that they were fledged by this point. They were observed a few times periodically after this date, though only one or two were seen at a time, or they were not together at all. As of August 7th, it appeared that one of these unbanded chicks had joined two chicks from Nest Two, banded X,G:O,-, where they foraged and mingled together on the beach.

Common and Interesting Behavior

The two later nests that were washed out were both nested on the beach flats, about mid-way between the shoreline and the base of the dunes. Upon being washed out, the

locations of the renests changed drastically. Instead of renesting in a similar area, one nest moved near the top of a dune, and nested in a thicket of dune grass for shade and protection. The other renest was placed around a pile of old drift wood that acted as protection from wind and possibly waves.

During incubation, one bird would often start peeping loudly to catch the attention of the mate. Upon hearing the peeping, the foraging mate would then run towards the nest, while keeping an eye out for predators, and then an incubation switch would occur.

It was noticed that the adults became very vocal once the chicks had hatched. They would constantly peep at the chicks as they foraged, or as they rested in the sand. If a chick foraged too far away, an adult would start peeping, and usually move towards the chick to keep it in site. Often times an adult would sit itself on top of a large piece of drift wood washed up on the beach to get a better view of the chicks.

Once the chicks were hatched, territorial disputes became quite common, especially between nests Two and Three because of their close proximity to each other. Parallel walking was common between the males and females. They would often parallel walk up and down the beach for up to 10 minutes at a time before they would burst into a full out dispute. One bird would hunch down low to the ground, fluff up its feathers to make itself look larger, and shuffle up to the intruder, where then they would either jump and swoop at each other, or run off and leave each other alone.

A few times, I noticed a behavior done by the males in a territorial dispute that resembled scraping. The male would run up to the intruding bird and aggressively push his breast into the sand, and kick out sand behind him with his legs. Usually a flight dispute would follow this, with one of the birds chasing the other up and down the beach in flight, until they were a good distance away from the chicks.

Another behavior that was common was to chase off other birds that are in close proximity to chicks or foraging grounds. This most commonly occurred once the Sanderlings and sandpipers started migrating through the area. If a group of Sanderlings were foraging too close to the plovers, an adult would run at the group of birds and chase them away, often flying them down the beach away from the chicks.

Once chicks were hatched, it was very uncommon for them to return to their nest site. They would forage within the area of the psychological fencing for a week or two, but commonly, their foraging range expanded to a very large area beyond the psychological fencing, which made it difficult to monitor and keep public away.

In the first few days after hatching, chicks were not very mobile, and would often sit beneath an adult, either under the wings, or beneath the brood patch, probably to regulate their temperature. A few times, chicks were observed sitting in the shadows cast by the psychological fencing signs to keep cool.

Upon fledging, the chicks would often temporarily follow groups of Sanderlings in flight and forage paths up and down the beach. The Sanderlings did not seem to mind, and it appeared to be good practice for the chicks. Eventually, the fledged plover chicks from different nests found each other and banded together in groups to forage and fly.

Weather

This summer seemed to have quite a few severe storms with high wind and surf. The psychological fencing around each nest had to be fixed multiple times from the surf either washing out the fence posts, drift wood being deposited on signs, or from the changing beach shoreline from erosion. Often times it was just a few posts that would fall down, but two or three times, the whole front line of fence posts would be knocked down and buried beneath sand, or even pulled out to the lake. One of our signs was found to be missing, and washed up on shore at the next large storm. It was also observed that a few of the fence posts were bent from strong winds.

Three of the Piping Plover nests were washed out by storms this year. The first wash out was on May 20th, 2012, before I had arrived at the park. The second two nests were washed out by the same storm on June 19th 2012. These nests were midway between the base of the dunes and the shoreline, and the storm surge and debris deposition from this storm was well past the location of the nests, and in some areas, up to the base of the dunes.

There was a large storm on the afternoon of July 4th that produced high winds and large waves as well. These knocked down much of the psychological fencing around all nests, and may have been a culprit in Nest Three only hatching one of the four eggs, as the chicks were expected to hatch on this day.

Public Relations

A majority of the people that I talked to on Long Island were from the surrounding area of Bayfield, Washburn, Ashland, and Madeline Island. Most people had heard of the Piping Plovers and knew they were endangered in the area. A lot of people though, did not realize that Long Island was the only place in Wisconsin that they are nesting at. A few groups I had talked to come out every year and have seen the exclosures in the past and respected the Plovers and gave them space.

For people that did not know about the Plovers, I would pull out our fliers, "Wisconsin's Rarest Bird" and "Identifying Endangered Piping Plovers". Both of these were very helpful in getting the information across. It instantly gave the people an image of the plover to have something to associate all the information to. A lot of times, one person would be reading through the fliers as I was explaining the Plovers' situation, and the flier would prompt many more questions. Also, in the case of families with children, the parents were often glad to take the fliers home for their kids, and on multiple occasions, I was told that the fliers and information would make for good school reports.

A majority of the people were happy to learn about the Piping Plovers. I only ran into a few groups who were not receptive to the information, and either did not want to be bothered, or did not want to leash up their dog. These groups also happened to be local people visiting the island. They often claimed that their dog would not run far, or that they would not go near the plover exclosures. There were also groups that would have a dog off leash in the distance, and by the time I would make it to their location, they would see me and leave the island by either returning to their boats, or going to the bay side of Long Island. Sometimes they would wait for me to pass before returning to the island, but often times, the sight of a park uniform would have them leave.

It seemed that the most popular time to visit the island was after Noon. Many boats just stayed near the light houses, but another very popular place to land boats was around the

cut, where a trail leads to the Chequamagon Bay side of the island, or where the tree line drops back and the dunes begin. This year, this was about a quarter of a mile from the nearest nesting exclosure, and a quarter mile from the campsite. People would usually walk down to the psychological fencing, just to see what it was, and then return to where they had beached.

There was only one issue with a couple camping on the beach, but they did not realize that they were within the National Park. There were no issues with anyone visiting the campsite from the lake side. The Piping Plover Monitor sign seemed to keep people away. There was one evening when a group of people had found the trail on the bay side that leads to the campsite, but once I mentioned it was a NPS campsite, they turned around and left.

Conclusion

Overall, a total of eight Piping Plover chicks were hatched from four nests protected by exclosures on Long Island. Three more chicks were fledged from a nest that was not found by the monitors, for a total of seven chicks fledged, and four more in the process of being fledged at the time of this writing, for the 2012 season. The results of this study are being used by the Apostle Islands National Lakeshore in conjunction with the US Fish and Wildlife Service and the Wisconsin DNR for the protection and growth of the Great Lakes population of the Piping Plover.