



## STATISTICS OF OSPREY DIVES AT POHTIOLAMPI IN SUMMER 2011

In spring 2010, we found that Pohtiolampi Osprey pool is suitable for gathering information about ospreys' prey dives into water. For this purpose, a webcam was set up to record activities at the nutrition pool. The webcam recorded activities at the nutrition pool in every three seconds from dawn to dusk. The images were also broadcasted online in every 4-8 seconds. In autumn 2010, all images were studied and statistics were gathered based on the set of images. In this way we prepared the statistics of the season 2010 over April 18 – September 25.

In April 2011, we decided to install two webcams on the wall of the bird hide. Both cameras were in use from April 1 to September 30. The first camera took daily still-images in every 3-4 seconds, from dawn till dusk. The second camera was for live broadcasting purposes. The live video stream was broadcasted to our website via a 3G network and **Bambuser service**.

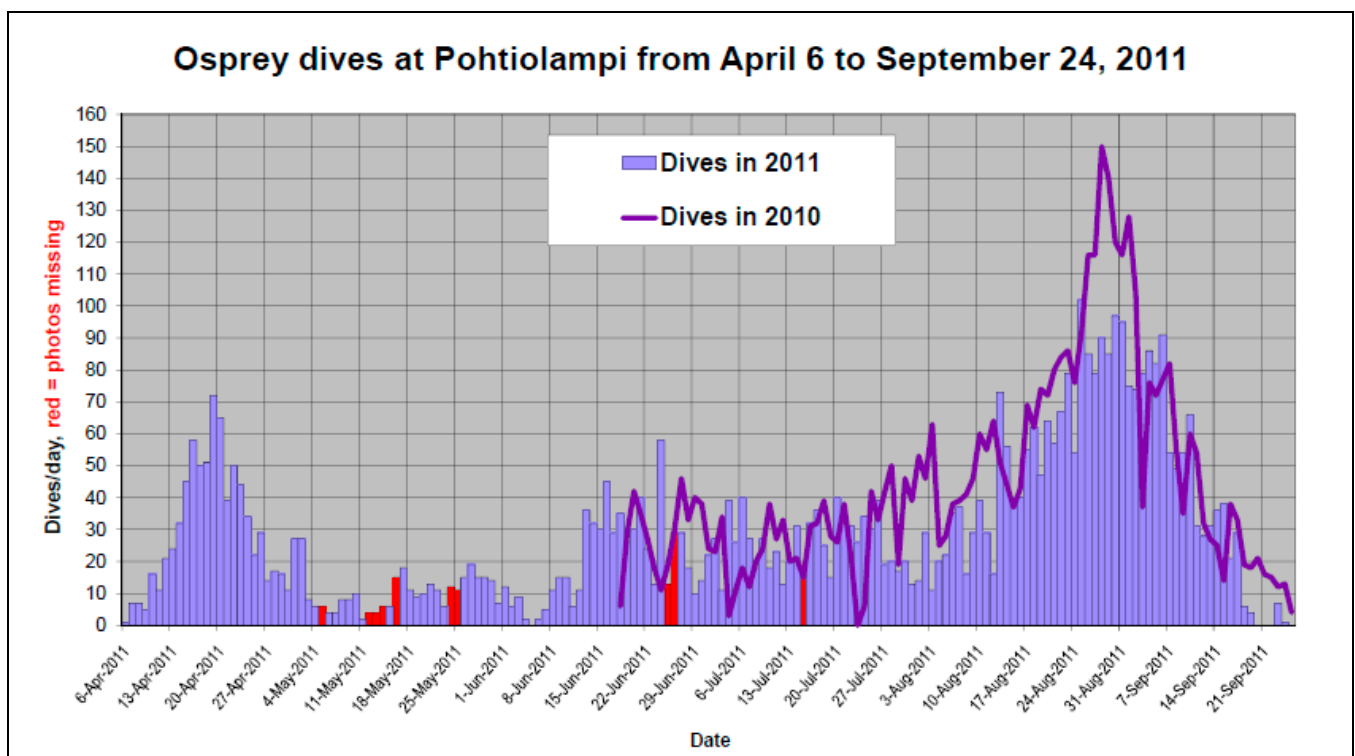
The webcam setup consisted of 2 Logitech's Webcam Pro 9000 webcams, ASUS laptop, DNA's Sierra Wireless mobile net stick and an external hard drive. The system was running through YamCam software (still-photos) and Adobe Flash Media Live Encoder 3.2 software (Live video broadcasting).

The Osprey video stream has proved to be very popular among the public as the traffic at Osprey Foundation's website doubled. Between April 1 to September 30, there have been 16 000 unique visitors from 64 countries. They visited the website 53 700 times with 120 600 page views. About 60 % of visitors have been Finnish and 40 % English-speaking. On the most popular days, there have been over 600 page views.

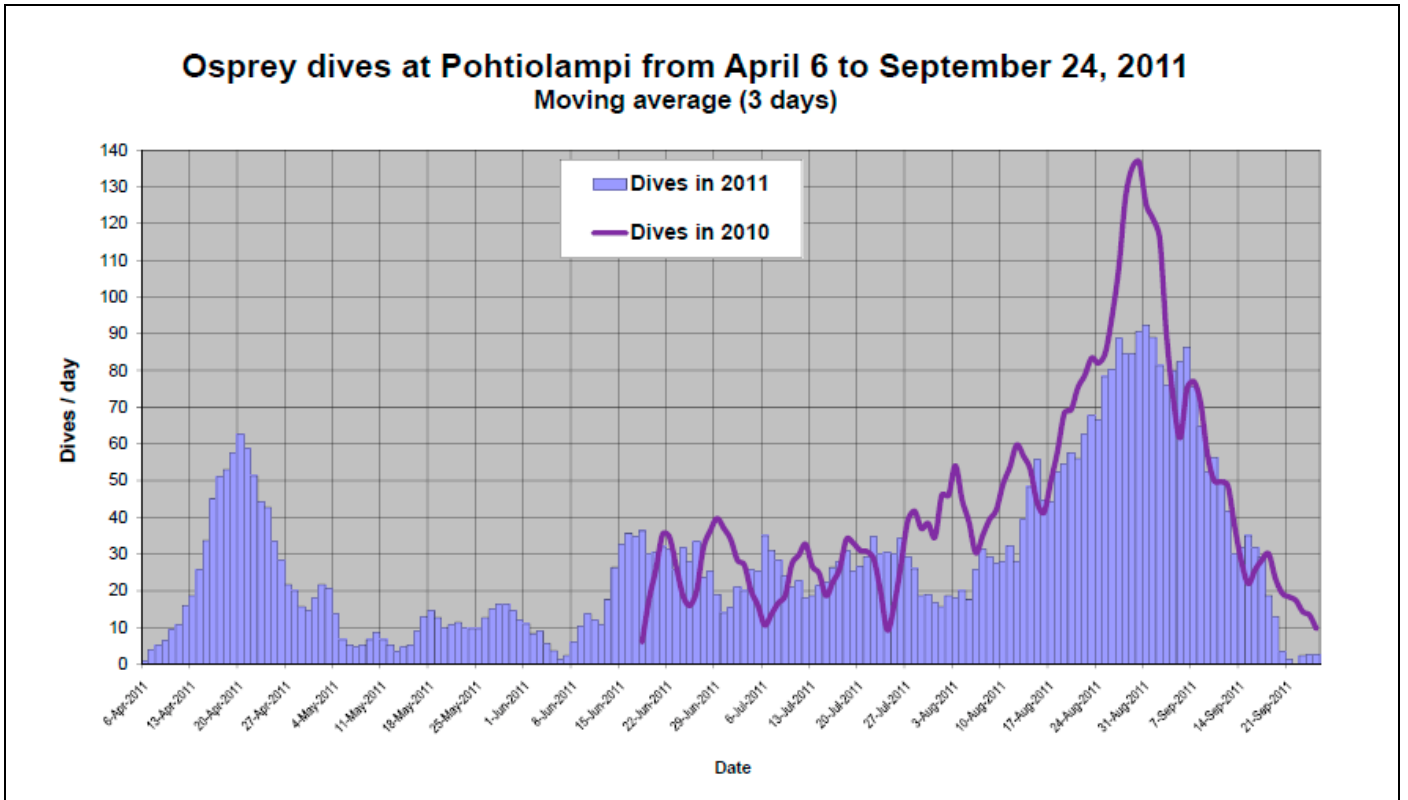
In autumn 2011, all still-images and videos were studied and the dives of ospreys were registered. At least one photo of each dive occurrence was documented.

### Results

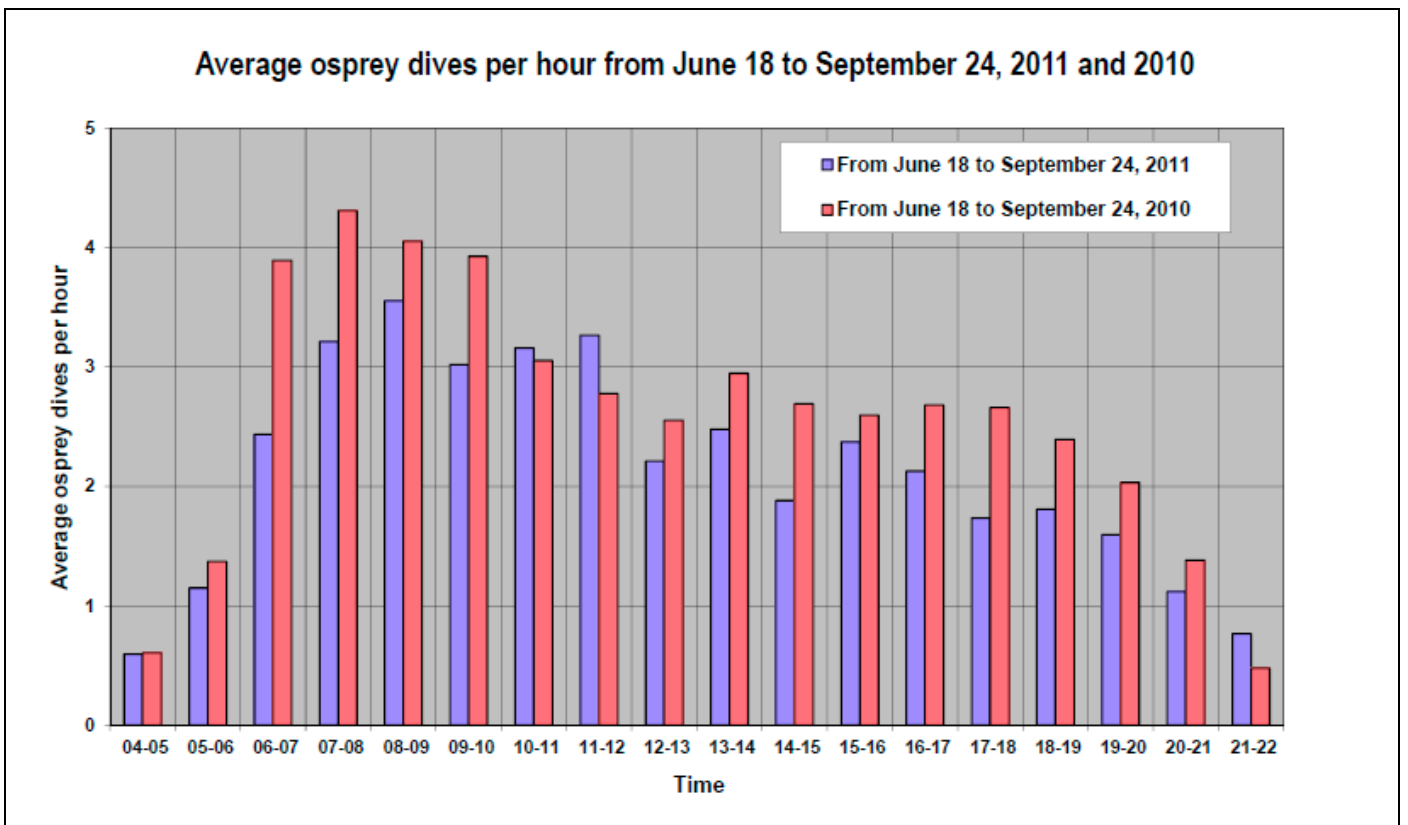
The figure below shows the osprey dives recorded on a daily basis. Altogether, there were 5 029 dives during the period. For comparison, the figure also shows the dives in 2010 from June 18 to September 25 (4 414 dives). This year's daily peak, 102 dives, occurred on August 25. A second peak was during the spring migration on April 19, when Pohtiolampi pond had been free of ice about 2 weeks, but all lakes nearby were still ice covered. Dives ended on September 24, when all birds had begun their fall migration. (Red columns in the diagram represent days when it was not possible to record all photos for e.g. technical reasons.)



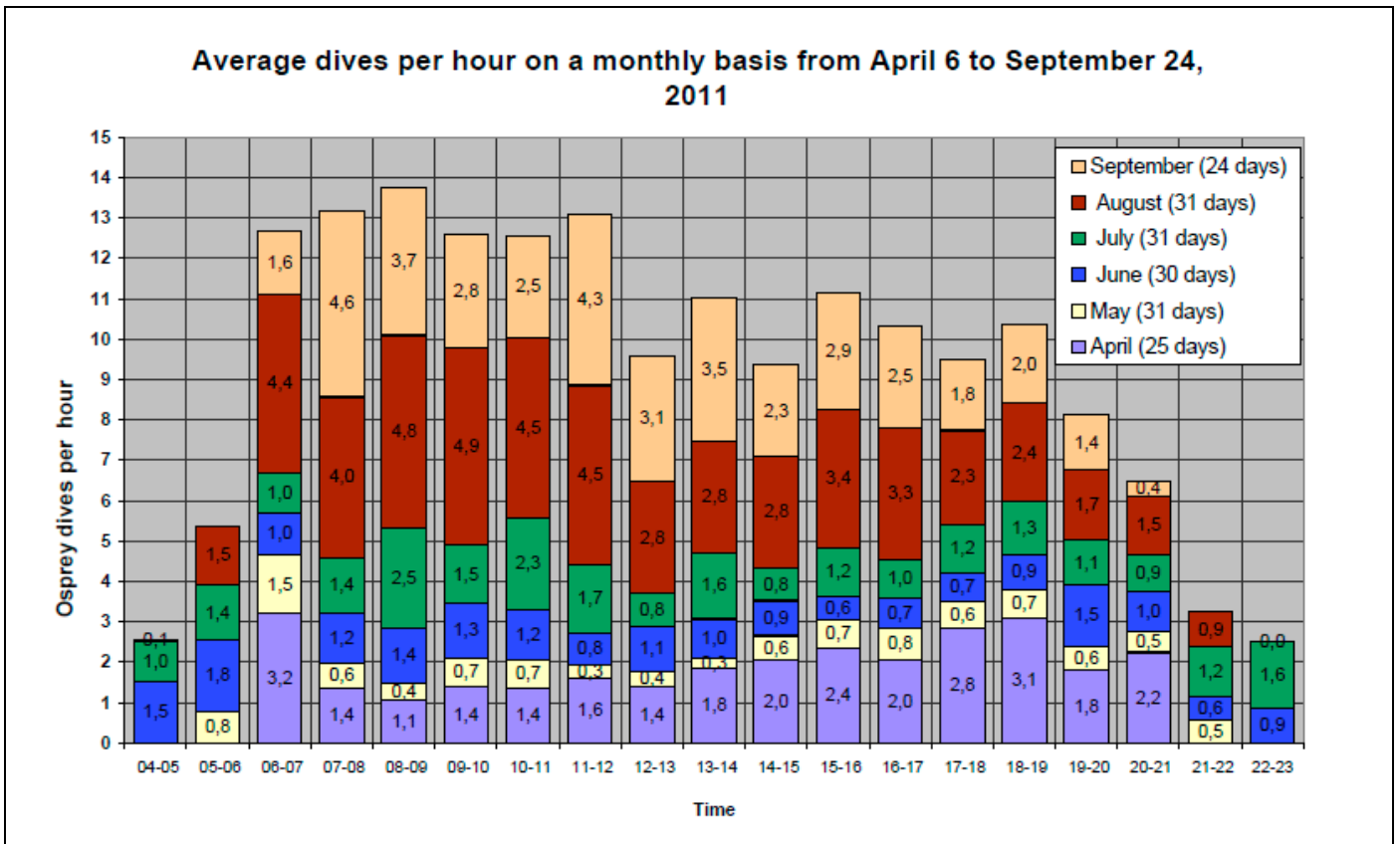
The figure below presents the same content using moving average of three days. With this method, the differences between 2011 and 2010 become more illustrative. The reference period lasted from June 18 to September 24. In 2011, the number of dives during the period was 3618. In 2010, it was 4362.



The next figure shows the average hourly rates of osprey dives from June 18 to September 24 in 2011 and 2010. Most dives (3-4 dives / hour) occurred in the morning hours, namely between 6 and 11 am. After that, the ospreys dived into the water on average 2-2.5 times per hour until 8 pm, when the number of dives decreased.



The next figure shows the monthly differences in the number of osprey dives per hour. In April, ospreys dived 1-3 times per hour on average. In May the number of dives was mainly less than 1 dive/hour. In June-July the number of dives was 1-2 per hour. In August, when also the females and young ospreys stayed at Pohtiolampi, the average number of dives doubled, or even tripled, compared to earlier summer months and was at its best almost 5 per hour. In September, during daylight there were 2-4 dives/h. In the autumn, as the daylight is shorter, the early morning hours (4-6 am) and the late evening hours (8 -11 pm) showed fewer dives compared to summer season.



## Summary

The Osprey dives in summer 2011 can be divided into four phases:

### Spring Migration, April 6 onwards

In early April, the number of Osprey dives at Pohtiolampi increased rapidly. The peak was on April 19 when there were 71 dives. The Osprey pool was purposively free ice-free in early April, while all other lakes in Southern Finland were still ice covered. The birds know where to get good fish during their spring migration!

### Nesting phase, May 4 onwards

The nesting phase is a quiet period. Male birds are responsible for feeding the female, and the need for food is small. There were 5–15 dives per day, with an average of 9 dives per day.

### Hatchery phase, ca. June 13 onwards

The need for food increased, as the birds sought to feed their chicks throughout the day. The number of dives was 20-35 per day, with an average of 26 per day.

### Preparing for autumn migration, ca. August 6 onwards

Ospreys need a lot of food when preparing for the autumn migration. This phase was the busiest period at Pohtiolampi. Male and female ospreys and also some juveniles came to the pool to catch big fishes. The number of dives was 30–100 per day, with an average of 50 dives per day.

The number of dives in 2011 was less than a year ago. This may be due to the following reasons:

- Nearby was a pair of uninhabited nests, which were in use in the previous year,
- The weather was often calm and warm and the birds could fish in nearby lakes,
- For some reason the fish moved in natural waters more than usual in shallow waters, and were easy prey for birds. For the same reason, only few grey herons were seen at Pohtiolampi.