About the HJA Ospreycam



The Ospreycam is trained on a nest that has been active every year since at least 2008. We believe the pair moved to this nest when a nest snag about ³/₄ of a mile downstream fell over. The nest is located on the broken top of a living old-growth Douglas fir tree, about 180 feet above Lookout Creek. The nest is about four feet in diameter and about the same in depth.

The Osprey pair typically arrives in April and birds are seen in the nest area until October. In each of the last five years we have seen two or three nestlings in the nest, and in most years at least one nestling has fledged, but we have made only anecdotal observations during this period.

We believe the pair hunts for fish in Blue River Reservoir and the McKenzie River, in addition to Lookout Creek. We often observe an adult flying over HJA Headquarters from the SW and in the direction of the nest, with a fish in its talons. On sunny days in the spring we often see two or three or even more Ospreys soaring and calling above Headquarters, and occasionally see more elaborate aerial displays.

The Ospreycam is deployed 200 ft up in an adjacent tree. At Andrews Headquarters the direct camera feed provides real-time video, which visitors can watch at our display in the front office. Unfortunately, our limited internet bandwidth prevents us from sending video to the outside world. Chris White and Raul Burriel at OSU set up the current still image capture, which refreshes every minute. Daily timelapse videos are also available from the OSU webcams page.





Running a webcam in the middle of a forest requires a complete power and communications system. Adam Kennedy designed the solar power system, with a charge controller, battery backup and power over Ethernet injectors to power the camera and a radio. We knew that if we could connect with our wireless communications tower on the ridge above the nest tree we would be in business, but it was a bit of a gamble since we couldn't see the tower through the trees. When we finally powered the system the connection was pretty good, and we breathed a collective sigh of relief.

We needed the entire system to be deployed in the tree canopy and to operate from April through October without maintenance, to avoid disturbing the nest. We also wanted a removable installation that would not damage the old-growth tree. Tom Abbott and Terry Cryer designed three customized steel supports for the radio, the solar panels, and the batteries, electronics and camera, all of which could be strapped securely to the trunk.







The installation posed a series of challenges. The first was accessing the canopy of the 250 foot Douglas fir without damaging it. Rob Miron of the Pacific Tree Climbing Institute used his bow and modified arrows and uncanny aim to get fishing line up over strong limbs in the crown – "our ticket to the top". From there it was just blood and sweat – mostly the latter – from our climbing and ground crews to get our 400 lbs. of equipment up and secured in the tree.



Approximations of an Osprey's view of HJA



Osprey Cam Hardware Parts List: Version 1

Installation Team: Tom Abbott, Terry Cryer, Adam Kennedy, Rob Miron, John Moreau, Mark Schulze

Camera: Axis M1114 w/ optional zoom lens (Fujinon 1.3 Megapixel Varifocal T360, 15-50 mm)

Radio(s): Tranzeo 900Mhz with integrated antenna

Power Supply:

Solar: Two 120W 12V panels wired in series
Batteries: Two 110aH Gel batteries
Charge Controller: SunSaver SS-10L-24v
POE: One 24v-24v POE from battery to radio and one 24v-48v POE from battery to camera
Breakers: 150v max breakers for solar array, battery, and load

Mounting hardware was constructed by Tom Abbott. Mounts included radio mounting bracket, solar array mounting bracket, and battery and communication bracket hardware. Tom used steel construction for all parts. The brackets were ratchet strapped to the tree, and backed up with 5000 lb test rope.

The site was linked to the Rd130 radio tower. The link does not have line-of-sight.

The station was brought online Mar-24-2014. Oregon State University Central Web Service office added a static image feed to its webcam page and updates the static image once per minute. We will continue to look at other options to increase the feed rate while reducing bandwidth usage.

A small monitor was added to the HJA front kiosk area with real-time video stream of the Osprey nest and the Lower Lookout Riparian cam. A mini FIT-PC was attached to the back of a flat panel monitor connected to a public HJA wifi link. A mouse will be left attached to the kiosk display. Users are encouraged to click the "snapshot" icon if something interesting is viewed in an image and to leave a short note describing the observed behavior in addition to the date and time of the observation.