

## 2011 Everglade Snail Kite nesting summary



*Photo Courtesy of Chuck Hanlon*

The Everglade Snail Kite (Kite), one of only three Total System-Wide Performance Measures for the Comprehensive Everglades Restoration Plan, has experienced an astonishing population decline in the past dozen years, decreasing from 3400 individuals to less than 700 today. Population models predict that if current trends continue, this iconic Florida species could become functionally extinct in a matter of 20 to 30 years. Because of the Kite's low population, a successful Kite nesting season is crucial for the survival of the species.

The 2011 nesting season for the Everglade Snail Kite had mixed results. Kites had a fairly successful year in the Kissimmee Chain of Lakes region. However, the news in the two most important nesting areas, Lake Okeechobee and the water conservation areas (WCAs) in the Everglades region, remains troubling. Table 1 depicts a preliminary assessment of the results, pending an official summary that

### Troubling news in the Everglades region and Lake Okeechobee

Kites suffered greatly in their critical habitats Lake Okeechobee and WCAs this year due to abnormally low water levels. There were 28 successful nests in Lake Okeechobee and the Everglades region in 2011. These areas are much larger than the Kissimmee Chain and are needed to sustain the long-term population viability of Kites, yet held far fewer nests. These shallow habitats are susceptible to short and long term impacts from droughts, like those in 2001, 2007, 2008, and now, 2011.

*Lake Okeechobee's littoral zone was bone dry in late May 2011. Photo Courtesy of Paul Gray*



should take researchers until March 2012 to complete.

**Table 1.** Preliminary Everglade Snail Kite nesting in Florida in 2011.

Location	Number of nests initiated	Number of successful nests	Percent successful nests
WCA3A	34	11	32
Lake Okeechobee	44	17	39
Lake Toho	98	38	39
East Lake Toho	67	35	52
<b>Statewide Total</b>	<b>294</b>	<b>110</b>	<b>37</b>



**Figure 2** depicts the observed number of fledged Kites from 1992 to 2010. It shows that after the 2001 drought, there were virtually no Kites on the Lake until 2006, and almost no fledglings after the 2007-08 drought until 2011. The long recovery times occur because apple snail populations, the main prey source for Kites, require years to recover after severe drought.

**Figure 3** shows that both Lake Okeechobee and the “Glades” (WCAs and Everglades National Park) each held about 100 Kites on April 1. As water levels declined rapidly thereafter, Kite numbers declined steadily. Water levels in Okeechobee dropped so much that perhaps only four of the 20 final nests on the lake succeeded, probably due to loss of habitat. It is likely the deteriorating habitat conditions contributed to low survival rates of fledged young.

**Figure 2.** Number of fledged (young that leave the nest) Everglade Snail Kites since 1992 (source: Florida Fish and Wildlife Conservation Commission (FWC)). The estimate of 200 fledged Kites in 2011 will be the most in years. Fledged birds still face perils and many will not survive until next year if habitat conditions are poor.

Fledgling birds need months to mature to be proficient at flying and feeding on their own. During past droughts researchers observed adults leave deteriorating habitat conditions and abandoning their nests and young. Even fledglings old and strong enough to flee poor habitat lack the experience to know where to go. Mortality rates for fledglings in such conditions have been more than 85%. Researchers will not be able to estimate juvenile mortality from 2011 until counts resume next year.

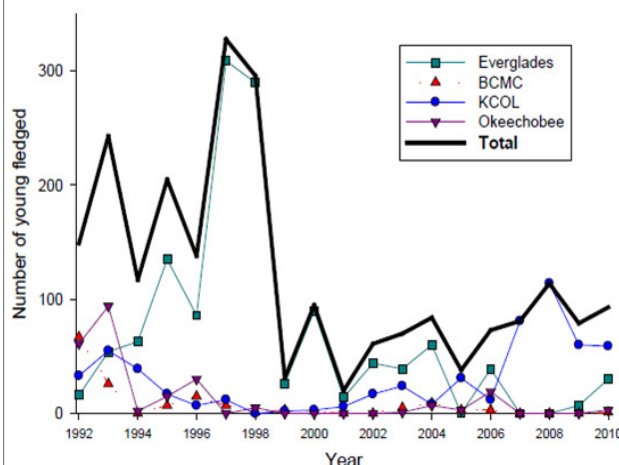
### Nesting in the Kissimmee Chain of Lakes

Nesting in the Kissimmee Chain of Lakes was fairly successful in 2011. This area is not listed as Kite critical habitat and has historically supported fewer nests than the Lake and WCAs. However, when the WCAs and the Lake are suffering from low water levels, this region can sustain nesting.

East Lake Tohopekaliga (Toho) and West Tohopekaliga held around 165 nests, roughly 56% of all the nests in Florida (Table 1). Preliminary nest success (the percent of nests where at least one young fledged) was 39% on the West lake and 52%

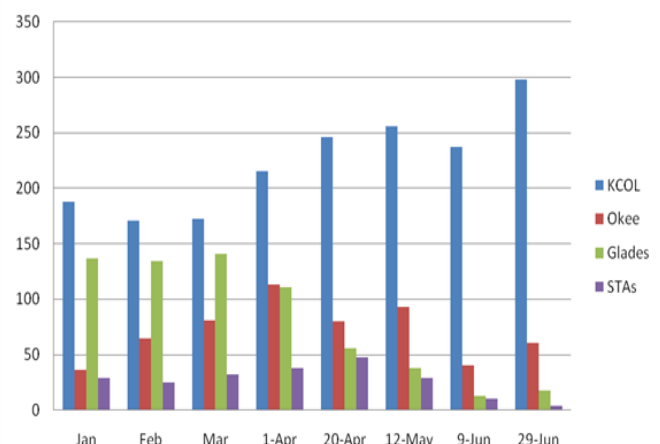
**Figure 3.** Number of Everglade Snail Kites counted by researchers in different regions of Florida (source: FWC).

**Figure 2.** Observed number of young fledged, 1992-2010.

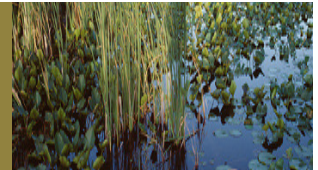


**Figure 3**

### **Total Kites by Area 2011**







*A Kite on Harney Pond Canal  
peers at exotic apple snail  
eggs.  
Photo by Chuck Hanlon*



on the East lake. Favorable nesting conditions lead to the Kissimmee Chain producing 70% of all successful nests in the state.

The Florida Fish and Wildlife Conservation Commission (FWC) managed the exotic plant hydrilla in West Toho in an innovative way this year. For the first time, FWC intentionally kept large areas of hydrilla and exotic snails to benefit Kite nesting. The high nest success indicates it worked. The Kites have been successfully foraging on an exotic apple snail that this exotic plant hosts.

### Reference

- Final nesting totals will differ somewhat than the numbers presented here because some nests initiated were not finished, some had unknown fates, and other considerations researchers must statistically analyze.
- Kitchens, W. J. Martin, C. Cattau, A. Bowling, C. Zweig, and E. Powers, 2007. Population ecology and conservation of the Snail Kite: an update. CERP Avian Workshop.

### The future

It appears the 110 successful nests throughout the Kite's Greater Everglades range fledged more than 200 young, the most in more than a decade (compare with Figure 3). However, the longer term survival of the fledglings remains unknown. The numbers are promising in the Kissimmee Chain of Lakes, but this region cannot sustain the entire Kite population. The vitality of Okeechobee and WCA habitats is needed in the long term to sustain this highly endangered species.

The weather forecast for the next nesting season looks much like last year's forecast: a very dry spring. If so, a repeat of this year's results, adequate nesting in northern areas and poor nesting in southern, could repeat. This year's nesting numbers appear insufficient to rebuild the three-thousand bird population of Everglade Snail Kites that existed a decade ago. Unless there is habitat recovery and stability in Lake Okeechobee and the Everglades, the Kite's future remains in jeopardy.

**Audubon calls on all parties to maximize water conservation in the upcoming dry season to maximize the chance for Everglade Snail Kite success, and to protect and enhance the natural features in south Florida.**



*Kites in Primrose at Harney Pond Canal in September, 2011. Photo by Chuck Hanlon*