

From: [Britta Muiznieks](#)
To: [Darrell Echols](#)
Cc: [Mike Murray](#); [Thayer Broili](#); [Doug McGee](#)
Subject: Re: AMOY chick injury from geolocators
Date: 07/07/2009 09:57 AM

Darrell-

There are smaller geolocators that are used on songbirds but they don't last as long. I believe Jessica has deployed 10 geolocators on 10 adult birds this summer. Only one of the adult birds was at CAHA (Gr AT at Sandy Bay-the previous band (Gr 06) was removed). When we were banding the adults, Jessica didn't have the geolocators that she was planning on using on the chicks so I was not able to compare size and weight of the adult vs chick geolocators. From what Jessica told us the geolocators used on the chicks were somewhat larger than those used on adults (but appropriate for wt of the chick at fledging). Not a lot is known about where chicks go post fledging until they become breeders at 3-5 years of age. We usually don't see banded chicks for 1-2 years post fledging or if we do it will only be 1-2 observations and then they disappear. The soonest they expect to be able to recapture these chicks is in 3-5 years post fledging when they have become breeding adults so the geolocators need to be able to store more data.

My understanding is that the geolocators are accurate to within 100 miles. There is no tracking involved but a recapture of the bird with the geolocator is necessary to download the data. The two prongs that stick out of the geolocator are used for downloading the data. The prongs on the chick geolocators stick out perpendicular to the band whereas the prongs on the adult geolocators are parallel with the band.

I found the following info on the internet...

The tracking system relies on instruments called solar geolocators that collect and store data on where the birds are in relation to the sun. Researchers remove the sensors, download the information and calculate where the birds were and when they were there. The devices do not transmit data in real time, but they record the exact time of sunrise and sunset allowing researchers to download the data later and calculate where each bird was on any given day.

I hope this helps,

Britta Muiznieks
Wildlife Biologist
Cape Hatteras National Seashore


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▼ [Darrell Echols/CAHA/NPS](#)

**Darrell
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To Britta Muiznieks/CAHA/NPS@NPS

0023709

07/07/2009 07:43 AM
cc Mike Murray/CAHA/NPS@NPS, Thayer
Broili/CAHA/NPS@NPS
Subject Re: AMOY chick injury from geolocators 

Britta,

Thanks for watching out for these birds. I have not used geolocators before, but it looks like it is too large/heavy for the chick, which is causing the band to weigh on the joint and abrade the skin. Do they come smaller or lighter? It sounds like from yesterday's bird call, that the birds are doing fine now that the bands have been removed.

Do these bands operate via radio signal that is then tracked with a receiver? How accurate are the locations?

Darrell

Darrell L. Echols
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**Britta
Muiznieks/CAHA/NPS**

07/06/2009 03:52 PM

To Thayer Broili/CAHA/NPS@NPS, Darrell
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cc Mike Murray/CAHA/NPS@NPS
Subject AMOY chick injury from geolocators

All-

We noticed the two chicks with geolocators limping shortly after banding on 6/29.

We informed Jessica and Ted of the problem and have kept a close eye on them over the past week. Although the problem didn't appear to be worsening both chicks visibly limped when running. Jessica came down last night and we caught both chicks this morning. Attached are pictures of the injuries caused by the band and geolocators. The decision was made to remove the band with the geolocator and not replace it with another band to allow the leg to heal without irritation (and to avoid additional stress to the chicks).

[attachment "Geolocator Injury.zip" deleted by Darrell Echols/CAHA/NPS]

The prongs of the geolocator appeared to cause the most damage to the leg. There was also some irritation at the top and bottom of the band (probably due to the weight of the transmitter). Upon release, the chicks were no longer limping.

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