

# Response of Breeding American Oystercatchers to Boat Disturbance



- Disturbance at nest sites can cause abandonment or reduced nest attendance, leading to heat/cold stress to developing embryos and chicks, and predation
- Based on experimental trials with pedestrians, Sabine (2005) recommended minimizing on-foot human disturbance within 137 m of nests during incubation
- Some island-nesting birds are more likely to be subject to disturbance from boat approaches or landings than other human activities

### Lower Cape Fear River



### Ocracoke Inlet









- No excessive heat, predators in area, or other stresses present
- Begin when incubating or brooding oystercatcher is on its nest/chicks and not alert
- Approach at idle speed, directly toward oystercatcher
- Record distances at responses:
  - Alert (difficult)
  - Stand
  - Call (difficult)
  - Walk slow
  - Walk fast
  - Fly
- Stop trial when oystercatcher is off its nest or away from chicks
- No more than 3 trials per nest

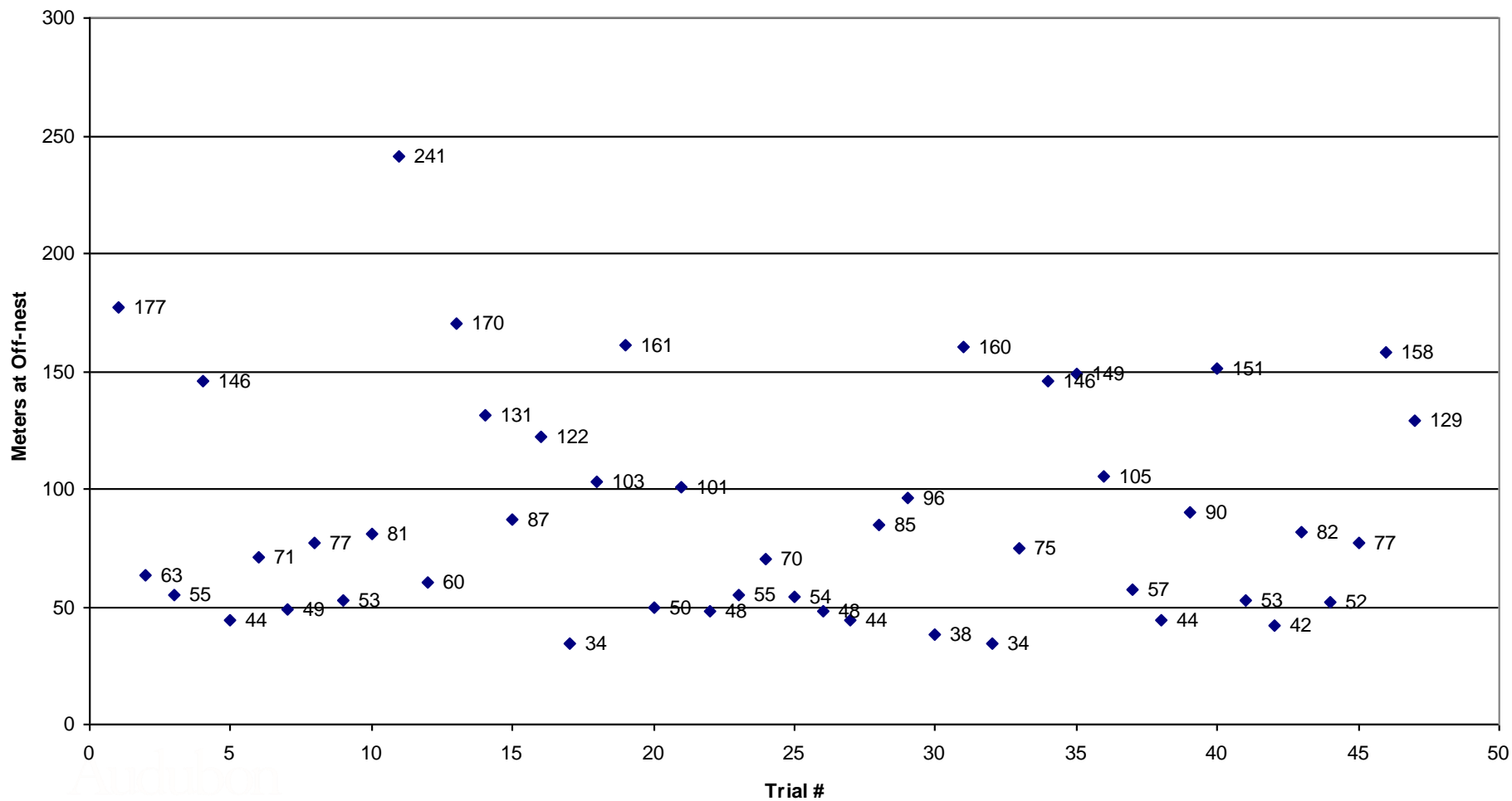
## Cape Fear River

	Pairs*	Nests	Trials	Chick Stage
2011	34/79	35	47	2
2012	19/60	21	30	1

## Ocracoke Inlet

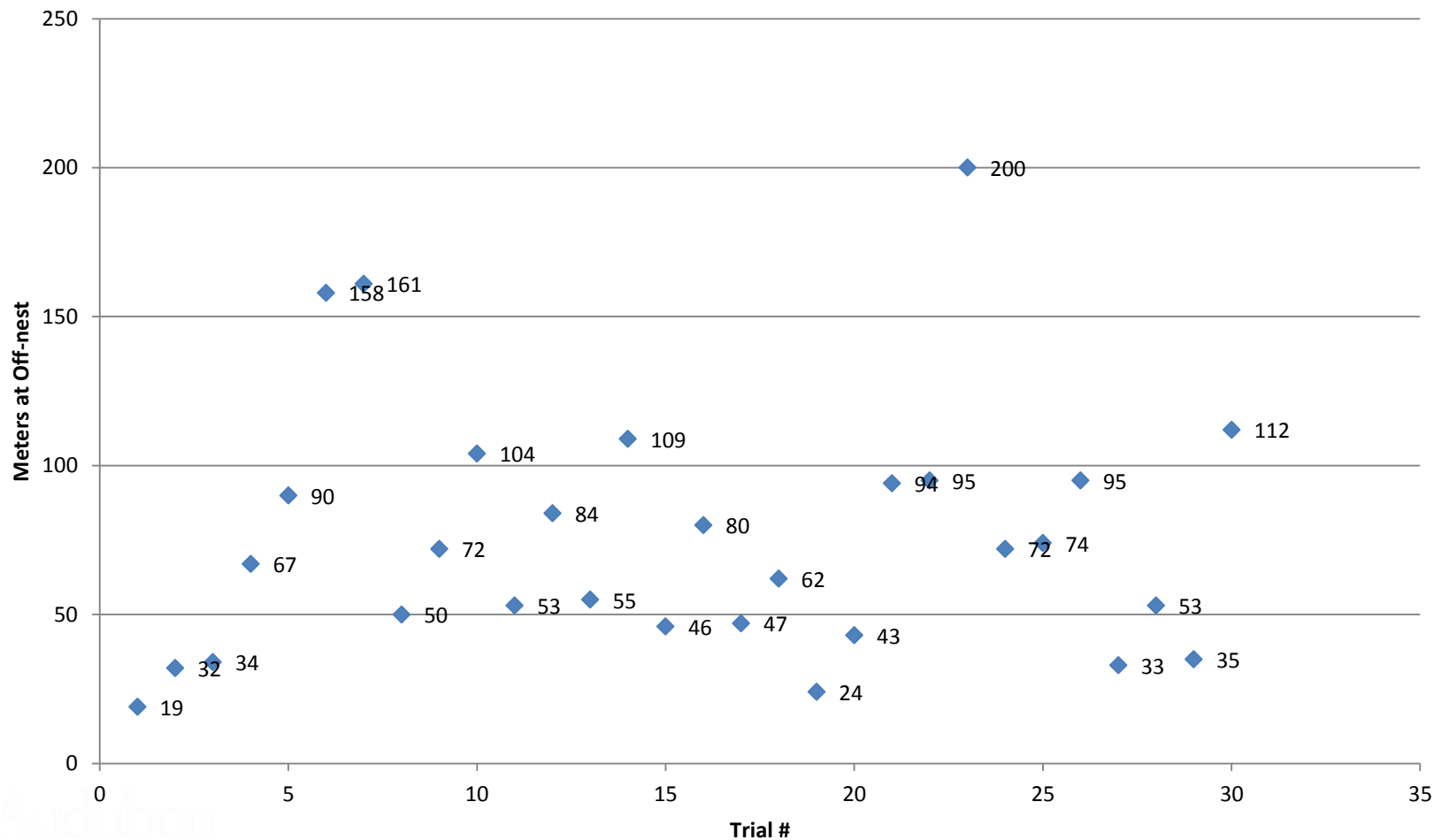
	Pairs *	Nests	Trials	Chick Stage
2011	6/14	6	18	9
2012	4/8	4	9	2

## Distance at Off Nest 2011

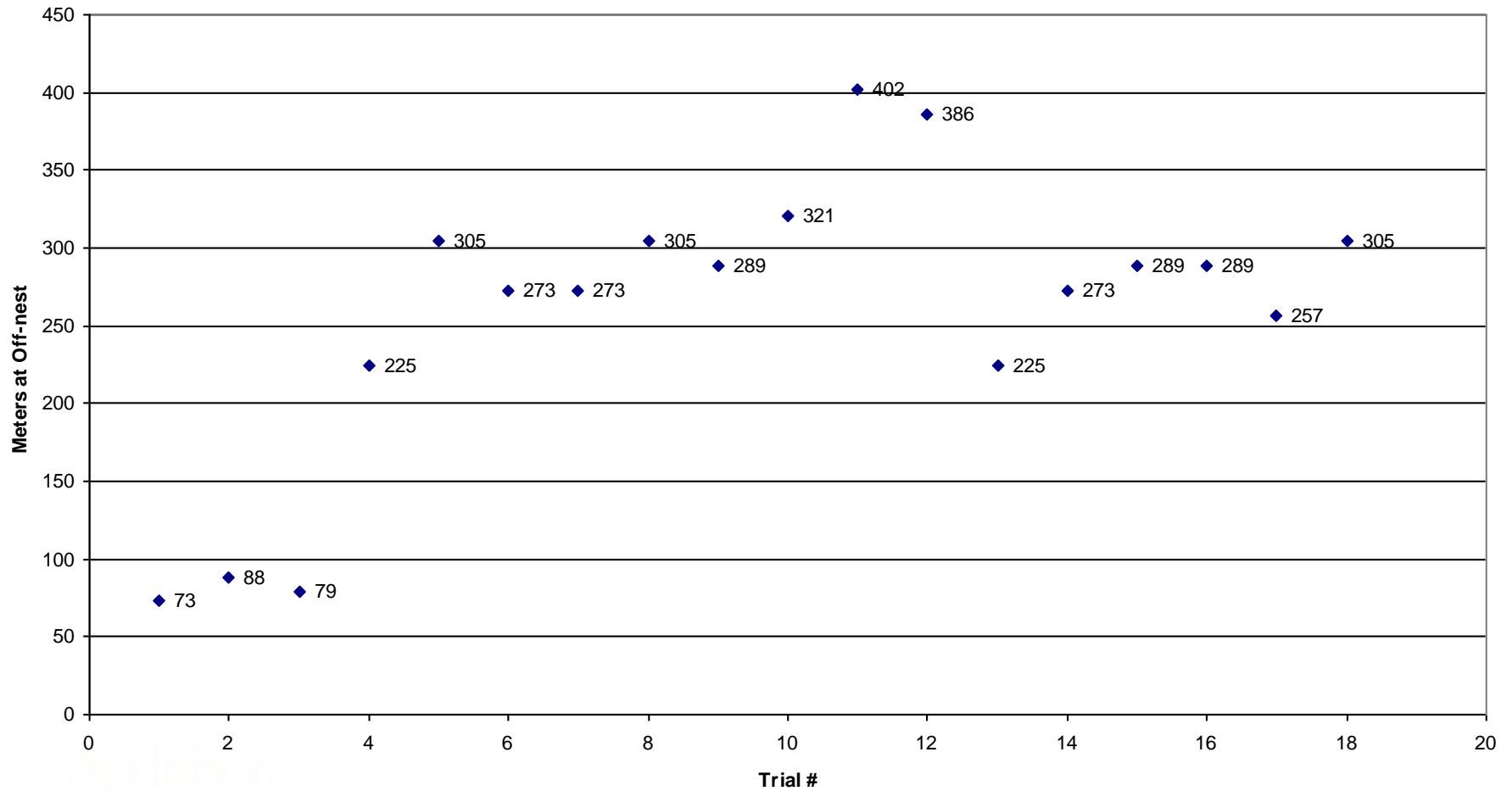




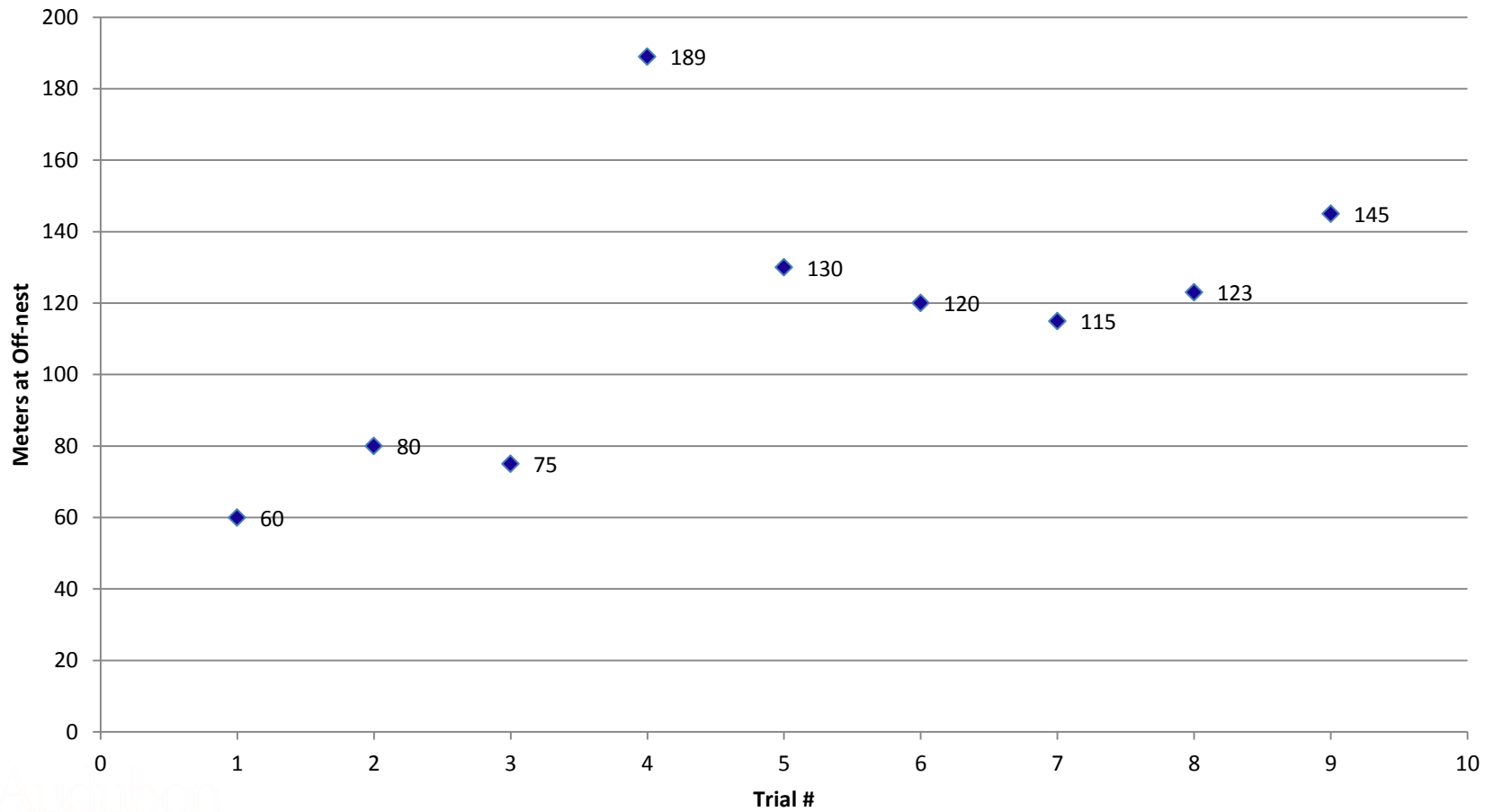
## Distance at Off Nest 2012



## Distance at Off Nest 2011



## Distance at Off Nest 2012



- Most oystercatchers were disturbed by boat approaching closer than 175-200 m
- Ocracoke Inlet oystercatchers more sensitive to boat approach than Cape Fear River oystercatchers
  - Different disturbance regimes, habituation or lack thereof, size of islands, same/different boat
  - Other species exhibit differences in response among individuals (Rodgers and Schwikert 2002)
- Oystercatchers appear to respond to direct approach by boat at a somewhat greater distance than foot approach
- Studies elsewhere?



- Rogers, J.A. and S.T. Schwikert. 2002 Buffer-zone distances to protect foraging and loafing waterbirds by personal watercraft and outboard-powered boats. *Conservation Biology* 16: 216-224.
- Sabine, J.B. 2005. Effects of human activity and predation on breeding American oystercatchers. MS thesis. The University of Georgia, Athens, GA.

# Discussion



## Responses by Oystercatchers to Boat Approach

**2011**

	Alert	Call	Stand	Walk Slow	Walk Fast	Fly
CFR	85%	9%	100%	81%	28%	13%
OCIN	79%	61%	100%	33%	67%	22%

**2012**

	Alert	Call	Stand	Walk Slow	Walk Fast	Fly
CFR	97%	17%	100%	77%	20%	7%
OCIN	60%	40%	100%	20%	70%	100%