

1 Methods

Over the course of 4 tagging seasons, 79 pop-up satellite archival tags were deployed by researchers, commercial fishermen and fishery observers. Combined these tracking data cover 9578.5 turtle-days. A range of Wildlife Computing PAT, SPLASH 323-B and MinPAT tags were used (Table 1).

| | 2011 | 2012 | 2014 | 2015 |
|--------------|------|------|------|------|
| MinPAT | 0 | 0 | 0 | 20 |
| PAT | 1 | 36 | 2 | 2 |
| SPLASH 323-B | 0 | 0 | 17 | 1 |

Table 1: The types of tags deployed over the 4 tagging seasons

Tag data was [[MIKE: DOWNLOADED FROM WC WEBSITE]] and processed using WC-DAP v3.0.369. Status messages and the minimum and maximum depths reported by WC-DAP were used to infer turtle fate. The tags were programmed to release after a set period (between 150–500 days after deployment), after a prolonged period (4–8 days) at a constant depth or reaching a maximum depth threshold of 1700 meters [[MIKE: Did 2015 tags have this threshold? I don’t see annotated anywhere?]].

2 Results

Turtle fate:

| PTT | Hook | Deploy date | Deployer | Deploy length | Fate |
|--------|-------|-------------|---------------------|---------------|----------------|
| 109813 | Light | 2011-08-27 | Observer/researcher | 5.25 | Lost |
| 109810 | Deep | 2012-05-01 | Observer/researcher | 142.50 | Float |
| 109817 | Deep | 2012-05-01 | Observer/researcher | 151.50 | Lost |
| 109820 | Deep | 2012-05-01 | Observer/researcher | 357.25 | Broken |
| 109809 | Deep | 2012-05-02 | Observer/researcher | 108.75 | Constant Depth |
| 109818 | Light | 2012-05-02 | Observer/researcher | 250.00 | Lost |
| 109819 | Deep | 2012-05-04 | Observer/researcher | 240.50 | Unknown |
| 109814 | Deep | 2012-05-07 | Observer/researcher | 24.50 | Lost |
| 109811 | Light | 2012-05-08 | Observer/researcher | 364.75 | Scheduled |
| 109812 | Light | 2012-05-08 | Observer/researcher | 357.75 | Lost |
| 120011 | Deep | 2012-06-14 | Fisherman | 120.00 | Broken |
| 117631 | Deep | 2012-06-14 | Fisherman | 2.25 | Lost |
| 120012 | Deep | 2012-06-14 | Fisherman | 357.50 | Scheduled |
| 117637 | Light | 2012-06-24 | Observer/researcher | 191.25 | Lost |
| 117636 | Light | 2012-07-09 | Fisherman | 61.50 | Broken |
| 109816 | Deep | 2012-07-25 | Observer/researcher | 71.50 | Constant Depth |
| 109815 | Light | 2012-07-27 | Observer/researcher | 205.75 | Float |
| 120015 | Deep | 2012-07-30 | Observer/researcher | 365.00 | Scheduled |
| 117630 | Light | 2012-08-01 | Observer/researcher | 66.00 | Broken |

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|--------|---------|------------|---------------------|--------|-----------|
| 117633 | Deep | 2012-08-01 | Observer/researcher | 79.50 | Float |
| 120020 | Deep | 2012-08-09 | Fisherman | 144.75 | Lost |
| 117635 | Light | 2012-08-09 | Observer/researcher | 183.50 | Float |
| 117629 | Deep | 2012-08-10 | Fisherman | 111.75 | Lost |
| 120017 | Light | 2012-08-20 | Observer/researcher | 42.00 | Lost |
| 120019 | Light | 2012-08-21 | Observer/researcher | 70.25 | Lost |
| 120018 | Light | 2012-08-21 | Observer/researcher | 359.25 | Scheduled |
| 120013 | Light | 2012-08-21 | Observer/researcher | 299.75 | Scheduled |
| 117632 | Deep | 2012-08-22 | Fisherman | 105.75 | Too Deep |
| 120014 | Light | 2012-08-22 | Observer/researcher | 269.00 | Unknown |
| 120016 | Deep | 2012-08-22 | Observer/researcher | 22.00 | Too Deep |
| 117634 | Deep | 2012-08-23 | Fisherman | 364.50 | Scheduled |
| 121237 | Deep | 2012-08-24 | Observer/researcher | 37.75 | Lost |
| 121236 | Deep | 2012-08-24 | Observer/researcher | 98.75 | Lost |
| 121240 | Deep | 2012-10-04 | Observer/researcher | 58.75 | Lost |
| 121241 | Deep | 2012-10-04 | Observer/researcher | 58.25 | Lost |
| 121238 | Deep | 2012-10-06 | Observer/researcher | 364.50 | Scheduled |
| 121239 | Light | 2012-10-06 | Observer/researcher | 363.50 | Scheduled |
| 139184 | Deep | 2014-07-09 | Observer/researcher | 21.75 | Float |
| 139182 | Deep | 2014-07-10 | Observer/researcher | 8.00 | Float |
| 139194 | Deep | 2014-07-12 | Observer/researcher | 72.25 | Float |
| 139180 | Deep | 2014-07-13 | Observer/researcher | 11.75 | Float |
| 139191 | Deep | 2014-07-13 | Observer/researcher | 0.50 | Float |
| 139188 | Deep | 2014-07-14 | Observer/researcher | 42.75 | Float |
| 137768 | No Hook | 2014-07-15 | Observer/researcher | 28.75 | Float |
| 137773 | Light | 2014-07-16 | Observer/researcher | 22.75 | Float |
| 137769 | No Hook | 2014-07-17 | Observer/researcher | 14.00 | Float |
| 139185 | Light | 2014-07-17 | Observer/researcher | 82.25 | Float |
| 137770 | Deep | 2014-07-18 | Observer/researcher | 5.75 | Float |
| 139190 | Deep | 2014-07-19 | Observer/researcher | 4.00 | Float |
| 139181 | Light | 2014-07-19 | Observer/researcher | 17.00 | Float |
| 139192 | Deep | 2014-07-20 | Observer/researcher | 50.50 | Float |
| 137771 | No Hook | 2014-08-01 | Fisherman | 13.00 | Float |
| 137766 | No Hook | 2014-08-03 | Fisherman | 19.75 | Float |
| 137772 | Deep | 2014-08-08 | Fisherman | 12.00 | Float |
| 129588 | Light | 2014-08-25 | Fisherman | 181.50 | Scheduled |
| 129589 | | 2014-08-25 | Fisherman | 55.75 | Float |
| 149018 | Deep | 2015-08-21 | Fisherman | 148.00 | Scheduled |
| 149004 | Deep | 2015-09-24 | Fisherman | 126.00 | Broken |
| 148992 | Light | 2015-09-06 | Observer/researcher | 145.00 | Scheduled |
| 148984 | Deep | 2015-08-08 | Observer/researcher | 147.50 | Scheduled |
| 152567 | No Hook | 2015-08-09 | Observer/researcher | 0.00 | Lost |
| 148983 | Deep | 2015-06-26 | Fisherman | 150.50 | Scheduled |
| 148976 | Deep | 2015-06-25 | Fisherman | 150.75 | Scheduled |
| 148991 | Light | 2015-06-25 | Fisherman | 122.50 | Float |

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|--------|---------|------------|-----------|--------|-----------|
| 148986 | Light | 2015-06-24 | Fisherman | 138.50 | Scheduled |
| 148996 | Light | 2015-06-24 | Fisherman | 20.75 | Float |
| 148988 | Light | 2015-06-25 | Fisherman | 79.50 | Too Deep |
| 148999 | Light | 2015-06-26 | Fisherman | 58.75 | Float |
| 148987 | Light | 2015-06-26 | Fisherman | 0.00 | Lost |
| 148985 | Light | 2015-06-25 | Fisherman | 147.25 | Scheduled |
| 148982 | Light | 2015-06-26 | Fisherman | 110.50 | Float |
| 148980 | Light | 2015-06-25 | Fisherman | 107.25 | Too Deep |
| 149014 | No Hook | 2015-08-22 | Fisherman | 149.75 | Scheduled |
| 149012 | Light | 2015-08-23 | Fisherman | 9.00 | Lost |
| 149010 | Light | 2015-08-30 | Fisherman | 27.00 | Float |
| 149008 | No Hook | 2015-08-20 | Fisherman | 149.75 | Scheduled |
| 149002 | Light | 2015-08-20 | Fisherman | 149.75 | Scheduled |
| 149015 | Deep | 2015-07-23 | Fisherman | 149.75 | Scheduled |
| 149011 | No Hook | 2015-08-30 | Fisherman | 149.75 | Scheduled |

Table 2: PTT tag IDs, hooking location, deployment date, deployment length and inferred fate for all turtles in the study

| | 2011 | 2012 | 2014 | 2015 |
|---------------|------|------|------|------|
| Broken | 0 | 4 | 0 | 1 |
| ConstantDepth | 0 | 2 | 0 | 0 |
| Float | 0 | 4 | 18 | 5 |
| Lost | 1 | 14 | 0 | 3 |
| Scheduled | 0 | 8 | 1 | 12 |
| TooDeep | 0 | 2 | 0 | 2 |
| Unknown | 0 | 2 | 0 | 0 |

3 Conclusions

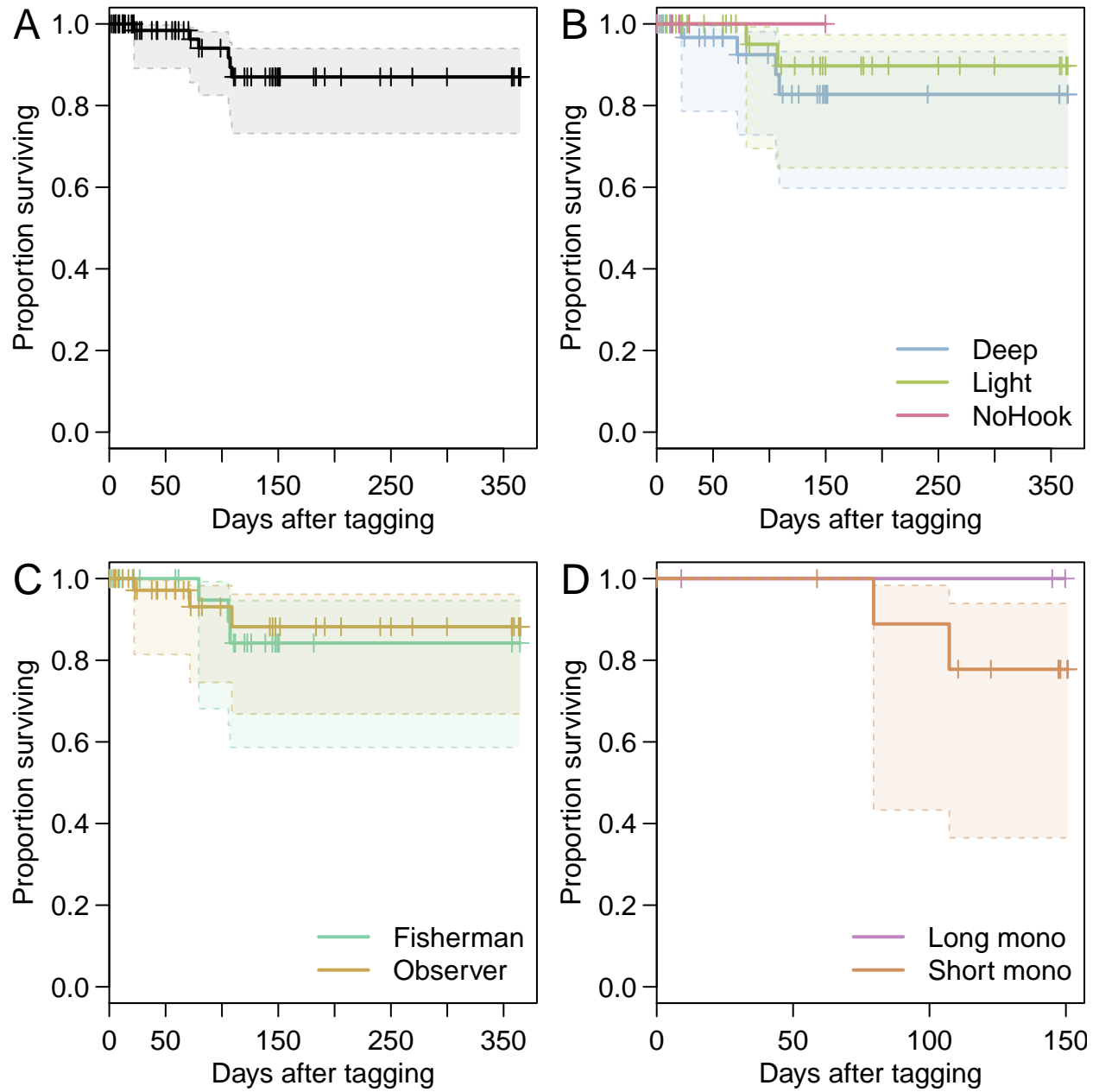


Figure 1: Kaplan-Meier curves showing the estimated proportion of turtles surviving over time for all turtles (A); deep, light or no hook turtles (B); observer or fisherman tagged turtles (C) and turtles with long (> 30 cm) or short pieces of monofilament left attached to hooks (D). Shaded regions indicate 95% confidence intervals.

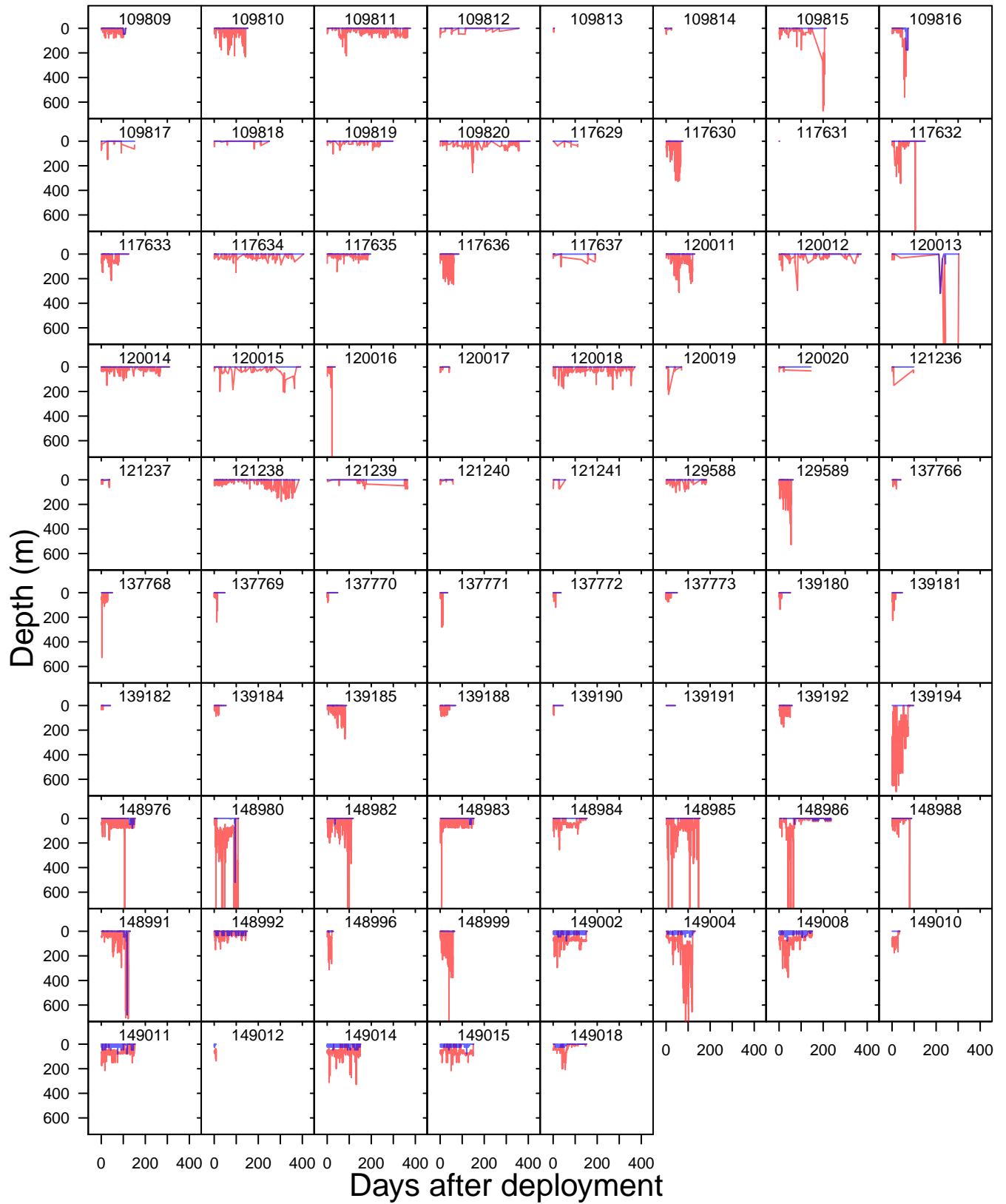


Figure 2: Minimum and maximum depth reports for all turtles in the study

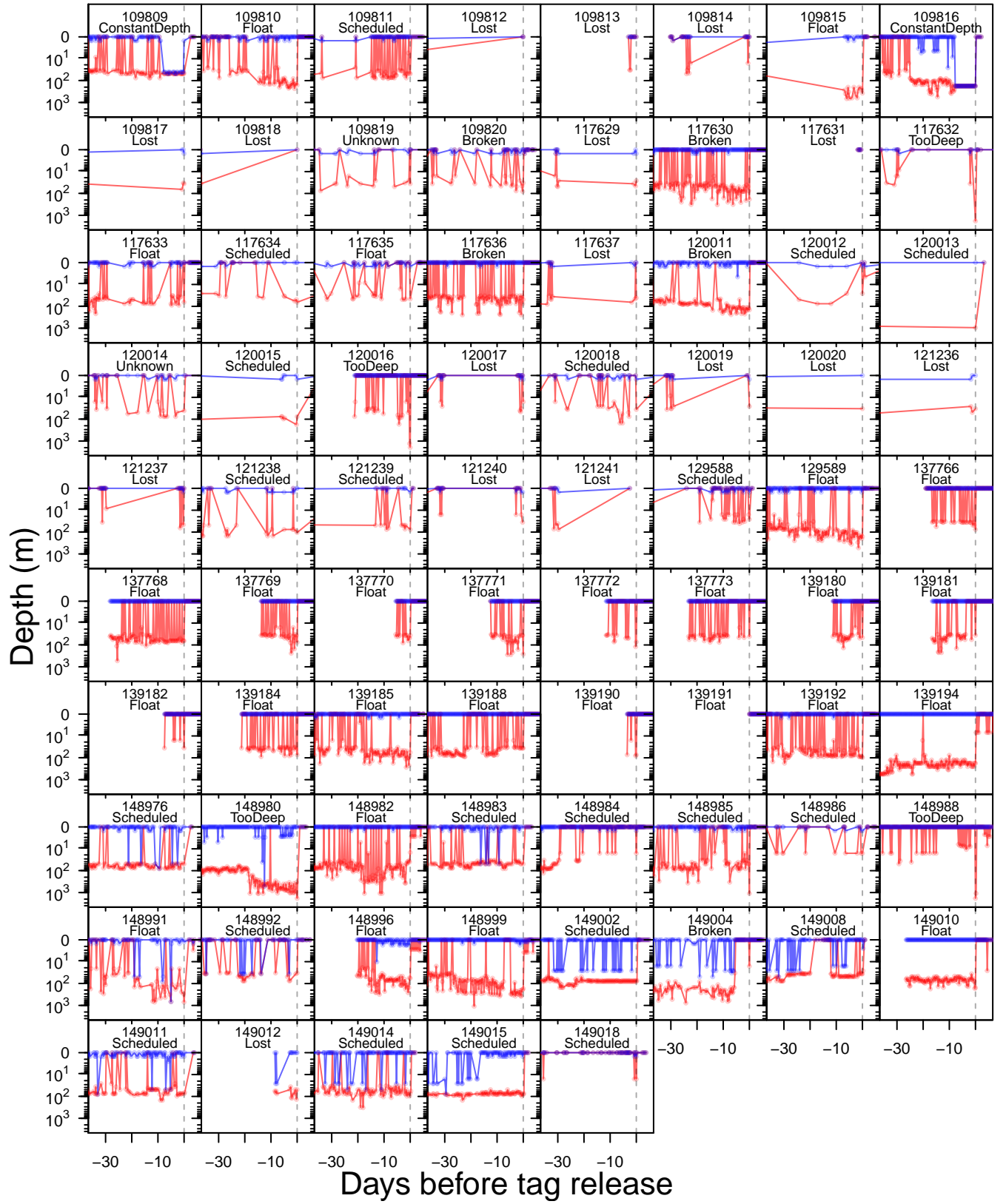


Figure 3: Minimum and maximum depth reports for all turtles in the study