

Acoustic telemetry exploratory analysis

Actel R package (1.2.1)

Study area

Stations

Deployments

Summary

Release sites

Target folder: E:/Palau/Research/Coastal Fisheries/Natalie Tagging/2022 Bohar tagging/Bohar_2022_2023/Data/Bohar_test

Warnings

Comments

Timestamp: **2023-05-02 11:38:17**

Biometrics

Number of target tags: **66**

Arrival times

Number of listed receivers: **25** (of which **13** had no detections)

Individual detections

Data time range: 2022-09-03 20:38:00 to 2023-04-07 19:38:00 (Pacific/Guam).

Percentage of post-release valid detections: 100%

Full log

Found a bug? **Report it here.** (<https://github.com/hugomflavio/actel/issues>)

Want to cite actel in a publication? Run `citation('actel')`

Study area

Release sites are marked with "R.S.". Arrows connected with an arrow indicate that the tags can only pass in one direction.



Receiver stations

Station.name	Latitude	Longitude	Array	Standard.name
Rebotel	7.250410	134.2398	Rebotel	St.1
Movement corridor 1	7.251840	134.2231	Movement_North	St.2
Movement corridor 3	7.273140	134.1950	Movement_North	St.3
Mutiaur 1	7.276160	134.1868	Mutiaur	St.4
Mutiaur 4	7.274850	134.1856	Mutiaur	St.5
Mutiaur 3	7.273700	134.1850	Mutiaur	St.6
Mutiaur 2	7.275290	134.1873	Mutiaur	St.7
Muriaur 5	7.274000	134.1871	Mutiaur	St.8
Mutiaur 6	7.274740	134.1895	Mutiaur	St.9
Movement corridor 2	7.260720	134.2107	Movement_North	St.10
Ulong channel	7.283020	134.2452	Ulong_channel	St.11
Siaes corner	7.314200	134.2208	Siaes_corner	St.12
Movement corridor 4	7.265020	134.1820	Movement_South	St.13
Movement corridor 5	7.253850	134.1893	Movement_South	St.14
Movement corridor 6	7.239040	134.1981	Movement_South	St.15
Movement corridor 7	7.224620	134.2059	Movement_South	St.16

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Station.name	Latitude	Longitude	Array	Standard.name
Movement corridor 8	7.190960	134.2138	Movement_South	St.17
Movement corridor A	7.164660	134.2232	Movement_South	St.18
Blue corner	7.133750	134.2213	Blue_corner	St.19
Movement corridor B	7.271060	134.2452	Ulong_sandbar	St.20
Back reef 1	7.234690	134.2204	Back_reef	St.21
Back reef 3	7.275998	134.2589	Back_reef	St.22
Back reef 4	7.293004	134.2639	Back_reef	St.23
Back reef 2	7.232567	134.2445	Back_reef	St.24
Back reef 5	7.194028	134.2358	Back_reef	St.25

Deployments

Receiver	Array	Station.name	Standard.name	Start	Stop
123722	Movement_South	Movement corridor 8	St.17	2022-09-01 10:00:00	2023-04-15 17:00:00
123723	Siae_corner	Siae corner	St.12	2022-09-01 10:00:00	2023-04-15 17:00:00
123726	Movement_South	Movement corridor A	St.18	2022-09-01 10:00:00	2023-04-15 17:00:00
125446	Mutiaur	Mutiaur 3	St.6	2022-08-31 10:00:00	2023-04-15 17:00:00
125515	Back_reef	Back reef 1	St.21	2022-12-14 10:00:00	2023-04-15 17:00:00
126283	Ulong_sandbar	Movement corridor B	St.20	2022-09-01 10:00:00	2023-04-15 17:00:00
126436	Movement_South	Movement corridor 4	St.13	2022-09-01 10:00:00	2023-04-15 17:00:00
126438	Mutiaur	Mutiaur 2	St.7	2022-08-31 10:00:00	2023-04-15 17:00:00
126439	Rebotel	Rebotel	St.1	2022-08-30 10:30:00	2023-04-15 17:00:00
126440	Movement_South	Movement corridor 5	St.14	2022-09-01 10:00:00	2023-04-15 17:00:00
126441	Movement_North	Movement corridor 2	St.10	2022-08-31 10:00:00	2023-04-15 17:00:00
126442	Movement_North	Movement corridor 1	St.2	2022-08-30 10:30:00	2023-04-15 17:00:00
126443	Mutiaur	Mutiaur 6	St.9	2022-08-31 10:00:00	2023-04-15 17:00:00
126444	Mutiaur	Mutiaur 4	St.5	2022-08-31 10:00:00	2023-04-15 17:00:00
126445	Movement_North	Movement corridor 3	St.3	2022-08-30 10:30:00	2023-04-15 17:00:00
134611	Movement_South	Movement corridor 6	St.15	2022-09-01 10:00:00	2023-04-15 17:00:00
138922	Back_reef	Back reef 5	St.25	2023-04-12 10:00:00	2023-04-15 17:00:00
138923	Back_reef	Back reef 2	St.24	2023-04-12 10:00:00	2023-04-15 17:00:00
138924	Back_reef	Back reef 4	St.23	2023-04-12 10:00:00	2023-04-15 17:00:00
138925	Back_reef	Back reef 3	St.22	2023-04-12 10:00:00	2023-04-15 17:00:00
487131	Ulong_channel	Ulong channel	St.11	2022-08-31 10:00:00	2023-04-15 17:00:00
487132	Movement_South	Movement corridor 7	St.16	2022-09-01 10:00:00	2023-04-15 17:00:00
487133	Mutiaur	Muriaur 5	St.8	2022-08-31 10:00:00	2023-04-15 17:00:00
487134	Mutiaur	Mutiaur 1	St.4	2022-08-31 10:00:00	2023-04-15 17:00:00
487135	Blue_corner	Blue corner	St.19	2022-09-01 10:00:00	2023-04-15 17:00:00

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	Station.name	Longitude	Latitude	Array	Standard.name	n.Lutjanus bohar	n.Lethrinus olivaceus	n.Carcharhinus amblyrhynchos	n.Negaprion acutidens
	Mutiaur	-	-	Rebotel	Mutiaur	34	14	11	1
	Siae_corner	-	-	Rebotel	Siae_corner	1	0	0	0
	Ulong_channel	-	-	Rebotel	Ulong_channel	1	0	4	0

Index: Warning messages

Summary	Warning: GUI is set to 'needed' but packages 'gWidgets2', 'gWidgets2RGtk2', 'RGtk2' are not available. Please install them if you intend to run GUI.																									
Study area	Disabling GUI (i.e. GUI = 'never') for the current run.																									
Stations	Warning: Long group names detected. To improve graphic rendering, consider keeping group names under six characters.																									
Deployments	Warning: Long array names detected. To improve graphic rendering, consider keeping array names under six characters.																									
Release sites	Warning: The spatial input does not contain a 'Section' column. This input is only valid for explore() analyses.																									
Warnings	Warning: Release sites were not specified in the spatial.csv file. Attempting to assume all released animals start at the top level array.																									
Comments	Warning: No detections were found for receiver(s) 125446, 125515, 126441, 126442, 126444, 126445, 134611, 138922, 138923, 138924, 138925, 487133, 487135.																									
Biometrics	Warning: 'speed.warning'/'speed.error' were not set, skipping speed checks.																									
Arrival times	Warning: 'inactive.warning'/'inactive.error' were not set, skipping inactivity checks.																									
Individual detections	Warning: Tag NA-14010 (1/24) jumped through 2 arrays from release to first valid event (Release -> Mutiaur).																									
Full log	Warning: Tag NA-14010 (1/24) jumped through 2 arrays in valid events 13 -> 14 (Mutiaur -> Movement_South).	Warning: Tag NA-14010 (1/24) jumped through 2 arrays in valid events 16 -> 17 (Movement_South -> Mutiaur).	Warning: Tag NA-14010 (1/24) jumped through 2 arrays in valid events 19 -> 20 (Mutiaur -> Movement_South).	Warning: Tag NA-14010 (1/24) jumped 2 or more arrays on 8 occasions (of which the first 4 are displayed above).	Warning: Tag NA-46646 (2/24) jumped through 2 arrays from release to first valid event (Release -> Mutiaur).	Warning: Tag NA-46647 (3/24) jumped through 4 arrays from release to first valid event (Release -> Siae_s_corner).	Warning: Tag NA-46648 (4/24) jumped through 2 arrays from release to first valid event (Release -> Mutiaur).	Warning: Tag NA-46648 (4/24) jumped through 6 arrays in valid events 26 -> 27 (Rebotel -> Ulong_sandbar).	Warning: Tag NA-46649 (5/24) jumped through 2 arrays from release to first valid event (Release -> Mutiaur).	Warning: Tag NA-46650 (6/24) jumped through 2 arrays from release to first valid event (Release -> Mutiaur).	Warning: Tag NA-46652 (7/24) jumped through 2 arrays from release to first valid event (Release -> Mutiaur).	Warning: Tag NA-46653 (8/24) jumped through 2 arrays from release to first valid event (Release -> Mutiaur).	Warning: Tag NA-46653 (8/24) jumped through 6 arrays in valid events 23 -> 24 (Rebotel -> Ulong_sandbar).	Warning: Tag NA-46653 (8/24) jumped through 6 arrays in valid events 24 -> 25 (Ulong_sandbar -> Rebotel).	Warning: Tag NA-46653 (8/24) jumped through 6 arrays in valid events 33 -> 34 (Rebotel -> Ulong_sandbar).	Warning: Tag NA-46653 (8/24) jumped 2 or more arrays on 11 occasions (of which the first 4 are displayed above).	Warning: Tag NA-46654 (9/24) jumped through 6 arrays in valid events 3 -> 4 (Rebotel -> Ulong_sandbar).	Warning: Tag NA-46654 (9/24) jumped through 3 arrays in valid events 6 -> 7 (Ulong_sandbar -> Ulong_channel).	Warning: Tag NA-46654 (9/24) jumped through 3 arrays in valid events 8 -> 9 (Ulong_channel -> Ulong_sandbar).	Warning: Tag NA-46654 (9/24) jumped through 6 arrays in valid events 9 -> 10 (Ulong_sandbar -> Rebotel).	Warning: Tag NA-46654 (9/24) jumped 2 or more arrays on 14 occasions (of which the first 4 are displayed above).	Warning: Tag NA-46655 (10/24) jumped through 2 arrays from release to first valid event (Release -> Mutiaur).	Warning: Tag NA-46655 (10/24) jumped through 6 arrays in valid events 17 -> 18 (Rebotel -> Ulong_sandbar).	Warning: Tag NA-46655 (10/24) jumped through 3 arrays in valid events 18 -> 19 (Ulong_sandbar -> Ulong_channel).	Warning: Tag NA-46655 (10/24) jumped through 2 arrays in valid events 21 -> 22 (Siae_s_corner -> Ulong_sandbar).	Warning: Tag NA-46655 (10/24) jumped 2 or more arrays on 17 occasions (of which the first 4 are displayed above).

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ed above).

Warning: Tag NA-51644 (11/24) jumped through 2 arrays from release to first valid event (Release -> Mutiaur).

Warning: Tag NA-51649 (12/24) jumped through 3 arrays in valid events 8 -> 9 (Rebotel -> Siae_corner).

Warning: Tag NA-51649 (12/24) jumped through 2 arrays in valid events 9 -> 10 (Siae_corner -> Ulong_sandbar).

Warning: Tag NA-51649 (12/24) jumped through 6 arrays in valid events 10 -> 11 (Ulong_sandbar -> Rebote1).

Warning: Tag NA-51649 (12/24) jumped through 4 arrays in valid events 15 -> 16 (Mutiaur -> Ulong_sandbar).

Warning: Tag NA-51649 (12/24) jumped 2 or more arrays on 16 occasions (of which the first 4 are displayed above).

Warning: Tag NA-51650 (13/24) jumped through 2 arrays from release to first valid event (Release -> Mutiaur).

Warning: Tag NA-51650 (13/24) jumped through 2 arrays in valid events 59 -> 60 (Mutiaur -> Movement_South).

Warning: Tag NA-51650 (13/24) jumped through 2 arrays in valid events 60 -> 61 (Movement_South -> Mutiaur).

Warning: Tag NA-51650 (13/24) jumped through 2 arrays in valid events 63 -> 64 (Mutiaur -> Movement_South).

Warning: Tag NA-51650 (13/24) jumped 2 or more arrays on 83 occasions (of which the first 4 are displayed above).

Warning: Tag NA-51651 (14/24) jumped through 2 arrays from release to first valid event (Release -> Mutiaur).

Warning: Tag NA-60855 (15/24) jumped through 2 arrays from release to first valid event (Release -> Mutiaur).

Warning: Tag NA-60856 (16/24) jumped through 2 arrays from release to first valid event (Release -> Mutiaur).

Warning: Tag NA-60856 (16/24) jumped through 2 arrays in valid events 6 -> 7 (Mutiaur -> Movement_South).

Warning: Tag NA-60856 (16/24) jumped through 2 arrays in valid events 7 -> 8 (Movement_South -> Mutiaur).

Warning: Tag NA-60856 (16/24) jumped through 2 arrays in valid events 17 -> 18 (Mutiaur -> Movement_South).

Warning: Tag NA-60856 (16/24) jumped 2 or more arrays on 5 occasions (of which the first 4 are displayed above).

Warning: Tag NA-60857 (17/24) jumped through 5 arrays from release to first valid event (Release -> Movement_South).

Warning: Tag NA-60858 (18/24) jumped through 2 arrays from release to first valid event (Release -> Mutiaur).

Warning: Tag NA-60859 (19/24) jumped through 2 arrays from release to first valid event (Release -> Mutiaur).

Warning: Tag NA-60859 (19/24) jumped through 2 arrays in valid events 1 -> 2 (Mutiaur -> Movement_South).

Warning: Tag NA-60859 (19/24) jumped through 2 arrays in valid events 5 -> 6 (Movement_South -> Mutiaur).

Warning: Tag NA-60859 (19/24) jumped through 2 arrays in valid events 6 -> 7 (Mutiaur -> Movement_South).

Warning: Tag NA-60859 (19/24) jumped 2 or more arrays on 5 occasions (of which the first 4 are displayed above).

Warning: Tag NA-60860 (20/24) jumped through 2 arrays from release to first valid event (Release -> Mutiaur).

Warning: Tag NA-60860 (20/24) jumped through 2 arrays in valid events 2 -> 3 (Mutiaur -> Movement_South).

Warning: Tag NA-60860 (20/24) jumped through 2 arrays in valid events 9 -> 10 (Movement_South -> Mutiaur).

Warning: Tag NA-60860 (20/24) jumped through 2 arrays in valid events 11 -> 12 (Mutiaur -> Movement_South).

Warning: Tag NA-60860 (20/24) jumped 2 or more arrays on 22 occasions (of which the first 4 are displayed above).

Warning: Tag NA-60861 (21/24) jumped through 2 arrays from release to first valid event (Release -> Mutiaur).

Warning: Tag NA-60861 (21/24) jumped through 2 arrays in valid events 105 -> 106 (Mutiaur -> Movement_South).

Warning: Tag NA-60861 (21/24) jumped through 2 arrays in valid events 107 -> 108 (Movement_South -> Mutiaur).

Warning: Tag NA-60861 (21/24) jumped through 6 arrays in valid events 588 -> 589 (Rebotel -> Ulong_sandbar).

Warning: Tag NA-60861 (21/24) jumped 2 or more arrays on 23 occasions (of which the first 4 are displayed above).

Warning: Tag NA-60862 (22/24) jumped through 2 arrays from release to first valid event (Release -> Mutiaur).

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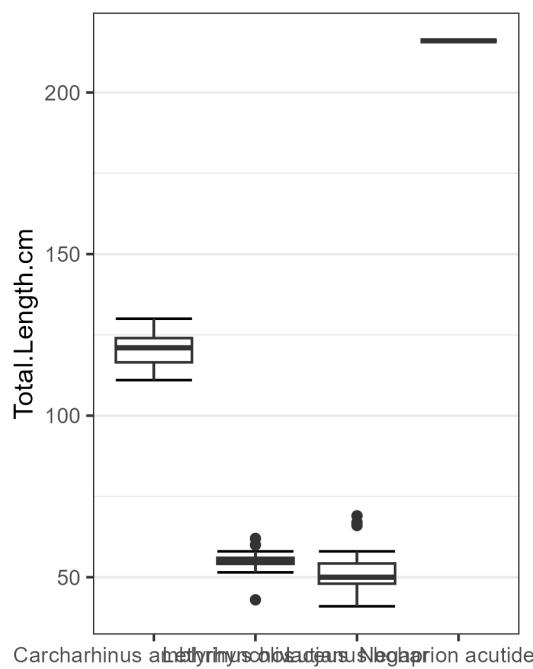
User comments

No comments were included during the analysis.

Biometric graphics

Note:

The data used in this graphic is the data present in the biometrics.csv file.



Average time of arrival at each Array

Note:

Coloured lines on the outer circle indicate the mean value for each group and the respective ranges show the standard error of the mean. Each group's bars sum to 100%. The number of data points in each group is presented between brackets in the legend of each panel.

You can replicate these graphics and edit them as needed using the `plotTimes()` function.

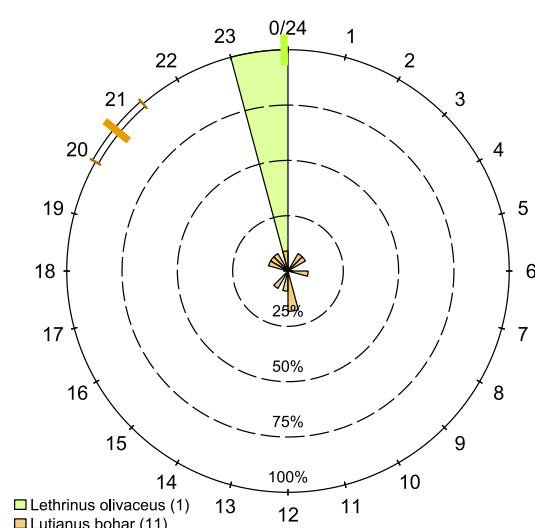
The data used in these graphics is stored in the `times` object.

Index:

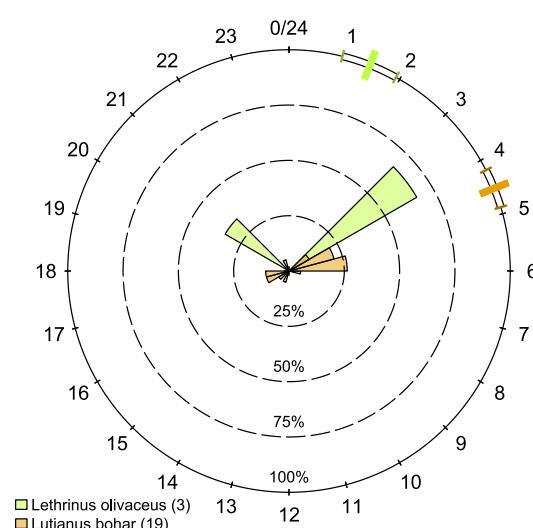
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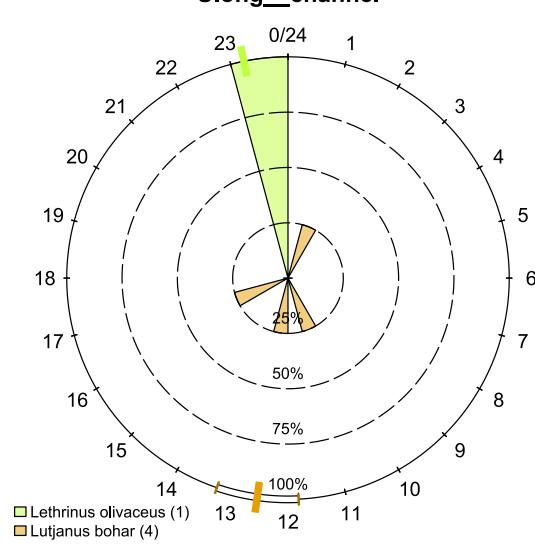
Rebotel



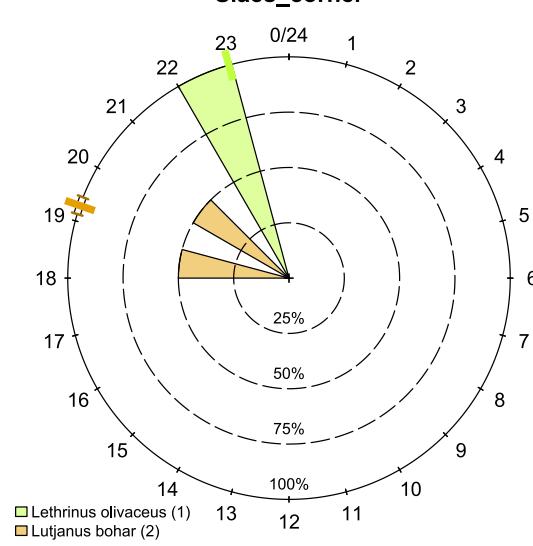
Mutiaur



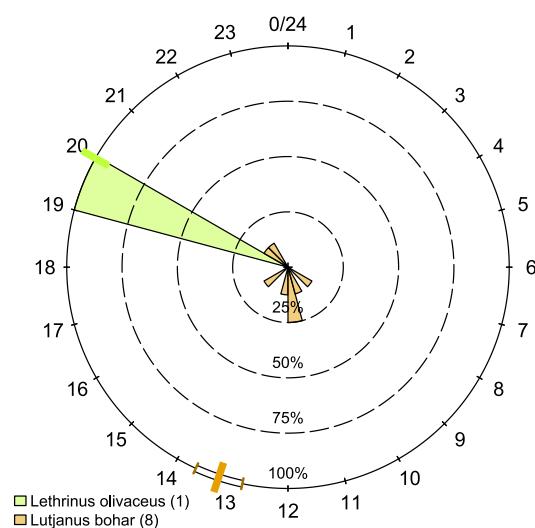
Ulong_channel



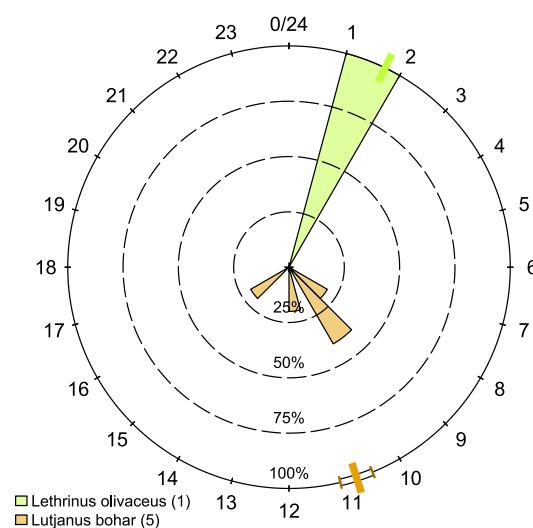
Siae_s_corner



Movement_South



Ulong_sandbar



Individual detection plots

Note:

You can choose to plot detections by station or by array using the `detections.y.axis` argument.

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The detections are coloured by section. The vertical black dashed line shows the release time. The full dark-grey line shows the movement events considered valid, while the dashed dark-grey line shows the movement events considered invalid.

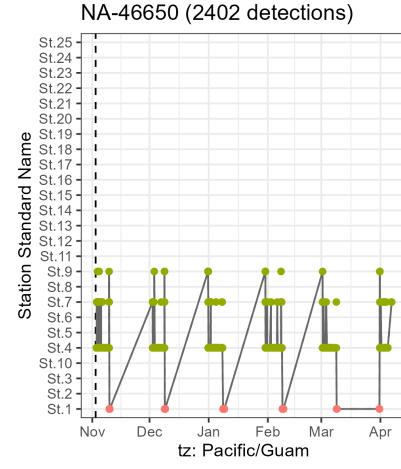
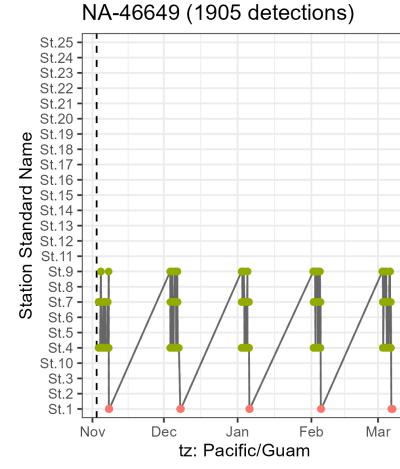
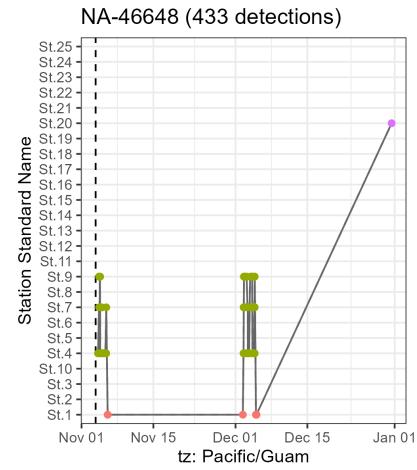
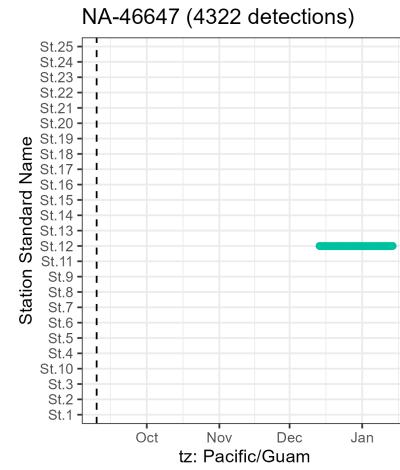
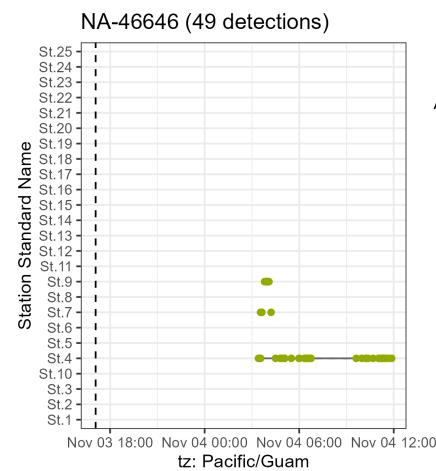
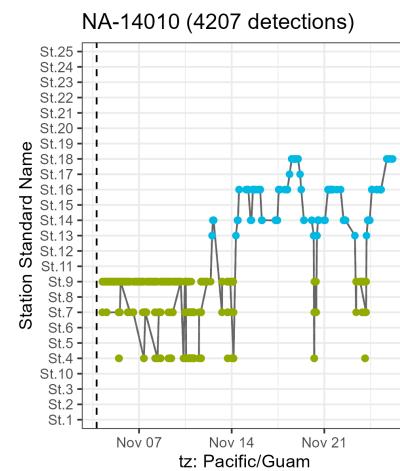
Manually **edited** tags are highlighted with **yellow** graphic borders.

The arrays have been aligned by section, following the order provided either in the spatial input or the `section.order` argument.

You can replicate these graphics and edit them as needed using the `plotDetections()` function.

You can also see the movement events of multiple tags simultaneously using the `plotMoves()` function.

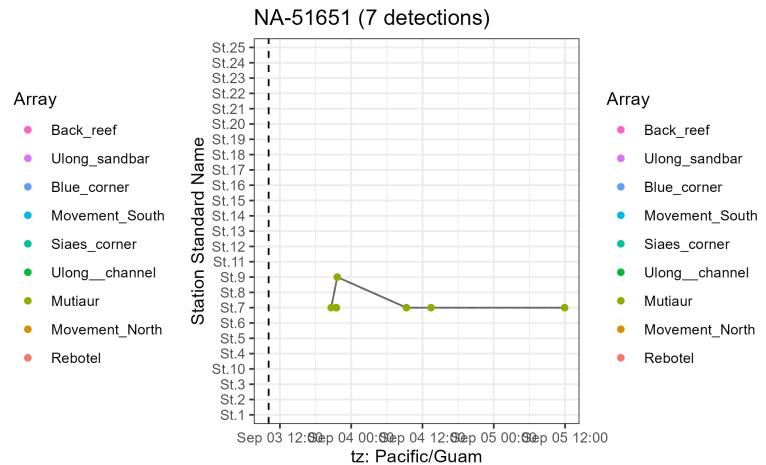
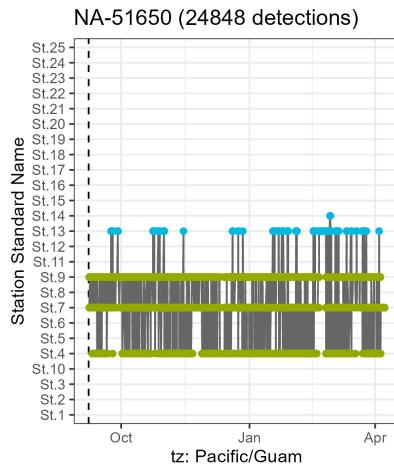
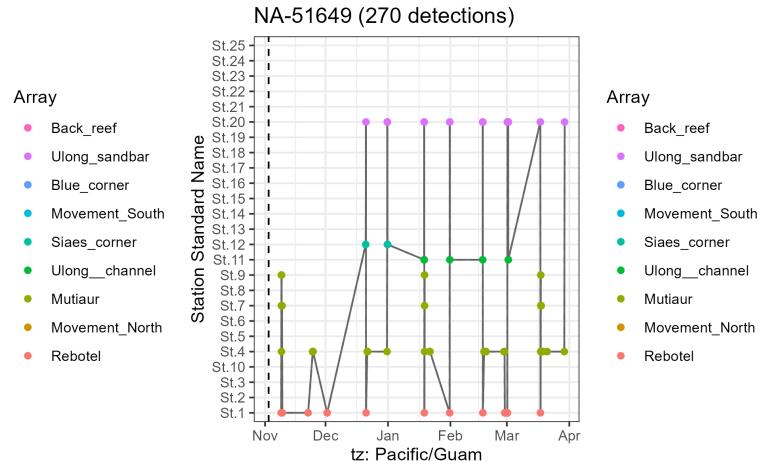
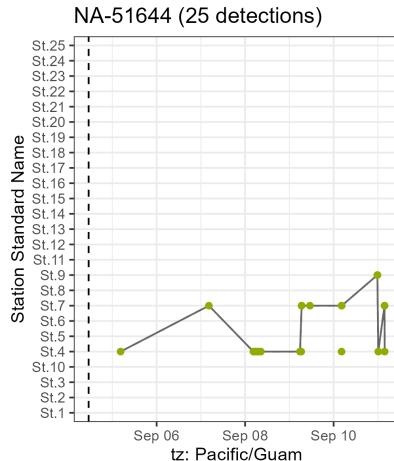
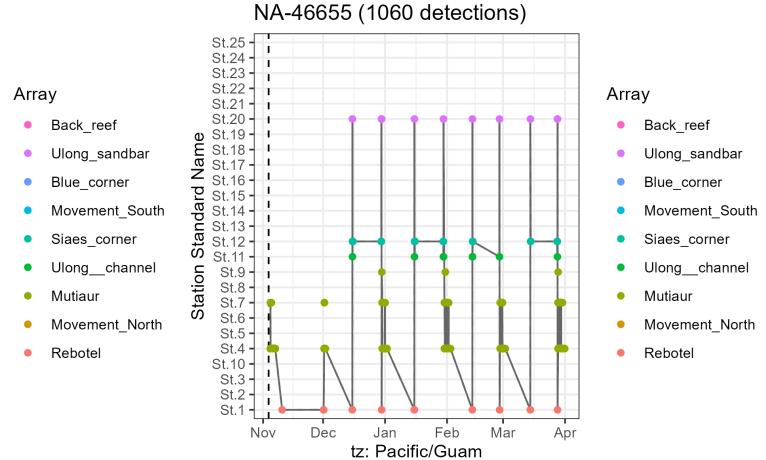
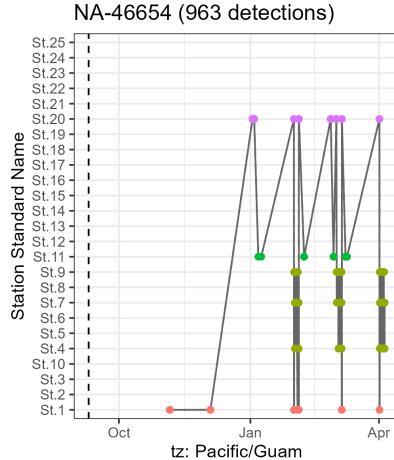
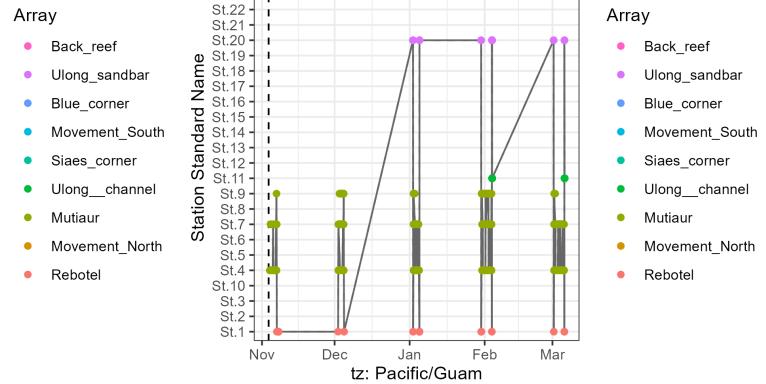
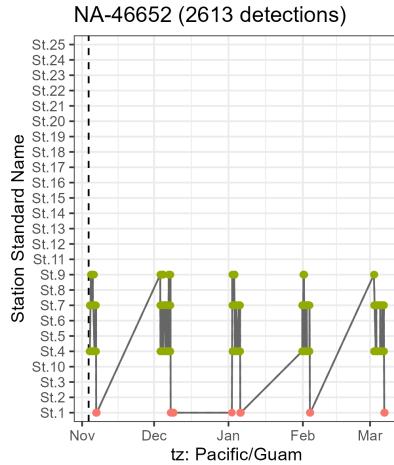
The data used in these graphics is stored in the `detections` and `movements` objects (and respective valid counterparts).



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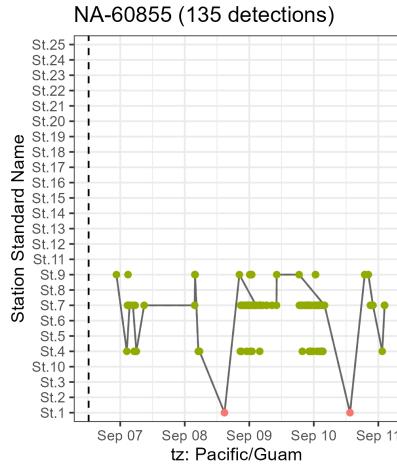
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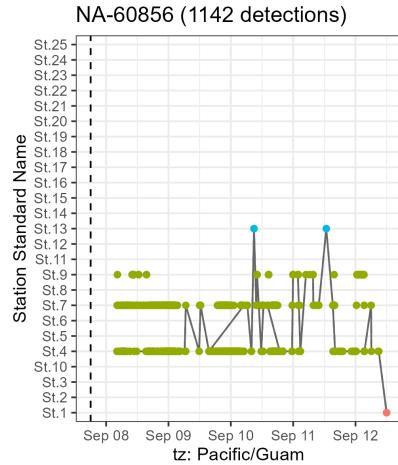
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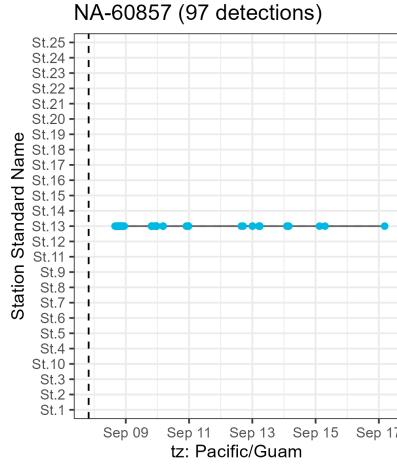
Array

- Back_reef
- Ulong_sandbar
- Blue_corner
- Movement_South
- Siaes_corner
- Ulong_channel
- Mutiaur
- Movement_North
- Rebotel



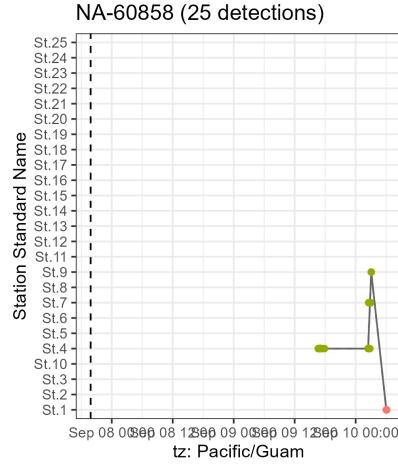
Array

- Back_reef
- Ulong_sandbar
- Blue_corner
- Movement_South
- Siaes_corner
- Ulong_channel
- Mutiaur
- Movement_North
- Rebotel



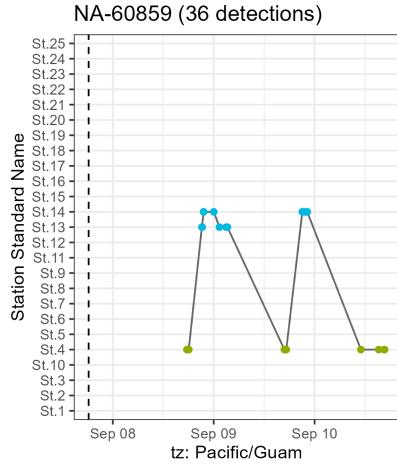
Array

- Back_reef
- Ulong_sandbar
- Blue_corner
- Movement_South
- Siaes_corner
- Ulong_channel
- Mutiaur
- Movement_North
- Rebotel



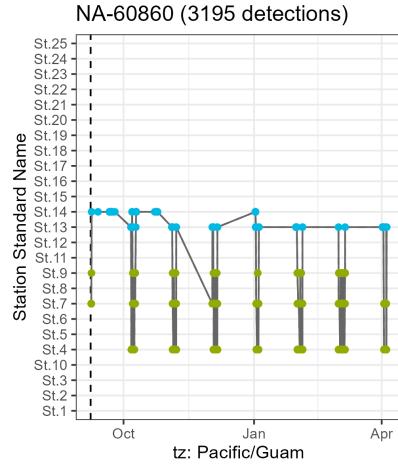
Array

- Back_reef
- Ulong_sandbar
- Blue_corner
- Movement_South
- Siaes_corner
- Ulong_channel
- Mutiaur
- Movement_North
- Rebotel



Array

- Back_reef
- Ulong_sandbar
- Blue_corner
- Movement_South
- Siaes_corner
- Ulong_channel
- Mutiaur
- Movement_North
- Rebotel



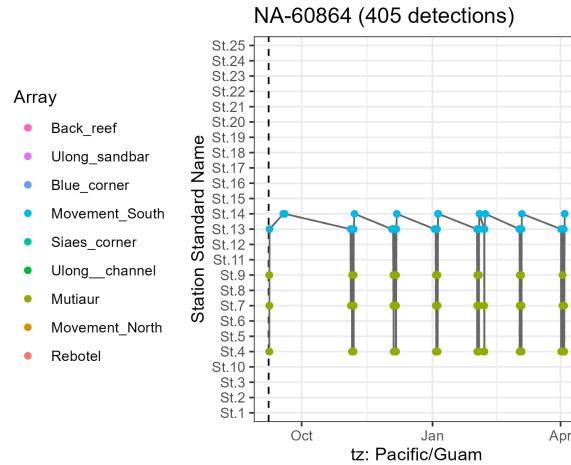
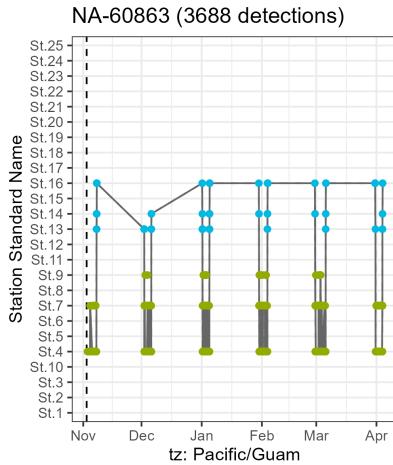
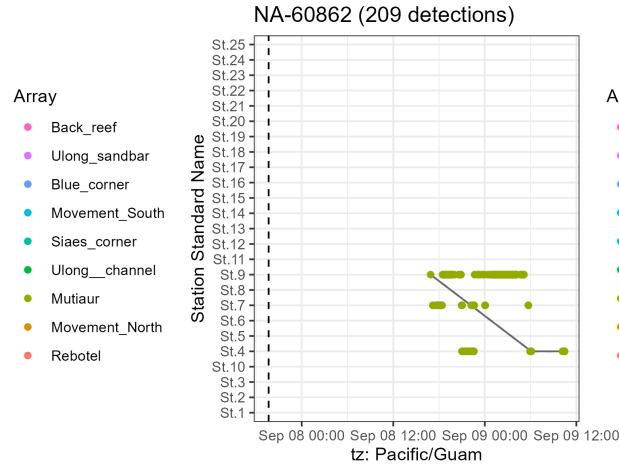
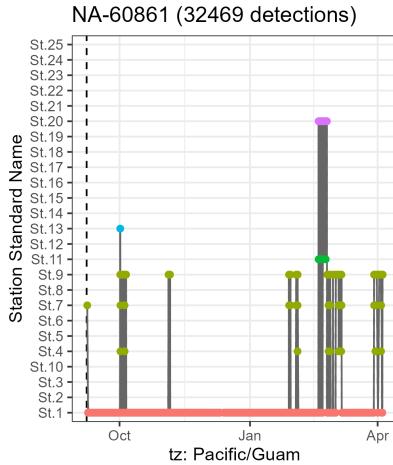
Array

- Back_reef
- Ulong_sandbar
- Blue_corner
- Movement_South
- Siaes_corner
- Ulong_channel
- Mutiaur
- Movement_North
- Rebotel

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```

Summary          Actel R package report.
Study area       Version: 1.2.1
Stations         Target folder: E:/Palau/Research/Coastal Fisheries/Natalie Tagging/2022 Bohar tagging/Bohar_2022_2023/D
                  ata/Bohar_test
Deployments      Timestamp: 2023-05-02 11:38:17
Release sites    Function: explore()

Warnings         M: 'report' option has been activated.
Comments         M: Importing data. This process may take a while.
                  Warning: Long group names detected. To improve graphic rendering, consider keeping group names under si
                  x characters.
Biometrics        M: Number of target tags: 66.
Arrival times    M: Number of ALS: 25 (of which 13 had no detections)
                  Warning: Long array names detected. To improve graphic rendering, consider keeping array names under si
                  x characters.
Individual        M: Number of target tags: 66.
                  Warning: The spatial input does not contain a 'Section' column. This input is only valid for explore()
                  detections
                  Warning: Release sites were not specified in the spatial.csv file. Attempting to assume all released an
                  imals start at the top level array.
Full log          M: Matching detections with deployment periods.
                  M: Data time range: 2022-09-03 20:38:00 to 2023-04-07 19:38:00 (Pacific/Guam).
                  M: Data successfully imported!
                  M: Creating movement records for the valid tags.
                  M: Checking movement events quality.
                  Warning: 'speed.warning'/'speed.error' were not set, skipping speed checks.
                  Warning: 'inactive.warning'/'inactive.error' were not set, skipping inactivity checks.
                  Warning: Tag NA-14010 (1/24) jumped through 2 arrays from release to first valid event (Release -> Muti
                  aur).
                  Warning: Tag NA-14010 (1/24) jumped through 2 arrays in valid events 13 -> 14 (Mutiaur -> Movement_Sout
                  h).
                  Warning: Tag NA-14010 (1/24) jumped through 2 arrays in valid events 16 -> 17 (Movement_South -> Mutiau
                  r).
                  Warning: Tag NA-14010 (1/24) jumped through 2 arrays in valid events 19 -> 20 (Mutiaur -> Movement_Sout
                  h).
                  Warning: Tag NA-14010 (1/24) jumped 2 or more arrays on 8 occasions (of which the first 4 are displayed
                  above).

                  Events that raised warnings: 1, 14, 17, 20, 51, 53, 66, 68
                  Warning: Tag NA-46646 (2/24) jumped through 2 arrays from release to first valid event (Release -> Muti
                  aur).
                  Warning: Tag NA-46647 (3/24) jumped through 4 arrays from release to first valid event (Release -> Siae
                  s_corner).
                  Warning: Tag NA-46648 (4/24) jumped through 2 arrays from release to first valid event (Release -> Muti
                  aur).
                  Warning: Tag NA-46648 (4/24) jumped through 6 arrays in valid events 26 -> 27 (Rebotel -> Ulong_sandba
                  r).
                  Warning: Tag NA-46649 (5/24) jumped through 2 arrays from release to first valid event (Release -> Muti
                  aur).
                  Warning: Tag NA-46650 (6/24) jumped through 2 arrays from release to first valid event (Release -> Muti
                  aur).
                  Warning: Tag NA-46652 (7/24) jumped through 2 arrays from release to first valid event (Release -> Muti
                  aur).
                  Warning: Tag NA-46653 (8/24) jumped through 2 arrays from release to first valid event (Release -> Muti
                  aur).
                  Warning: Tag NA-46653 (8/24) jumped through 6 arrays in valid events 23 -> 24 (Rebotel -> Ulong_sandba
                  r).
                  Warning: Tag NA-46653 (8/24) jumped through 6 arrays in valid events 24 -> 25 (Ulong_sandbar -> Rebote
                  l).
                  Warning: Tag NA-46653 (8/24) jumped through 6 arrays in valid events 33 -> 34 (Rebotel -> Ulong_sandba
                  r).
                  Warning: Tag NA-46653 (8/24) jumped 2 or more arrays on 11 occasions (of which the first 4 are displayed
                  above).

                  Events that raised warnings: 1, 24:25, 34, 36, 55:58, 79:80
                  Warning: Tag NA-46654 (9/24) jumped through 6 arrays in valid events 3 -> 4 (Rebotel -> Ulong_sandbar).
                  Warning: Tag NA-46654 (9/24) jumped through 3 arrays in valid events 6 -> 7 (Ulong_sandbar -> Ulong_ch

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annel).

Warning: Tag NA-46654 (9/24) jumped through 3 arrays in valid events 8 -> 9 (Ulong_channel -> Ulong_sndbar).

Warning: Tag NA-46654 (9/24) jumped through 6 arrays in valid events 9 -> 10 (Ulong_sandbar -> Rebote 1).

Warning: Tag NA-46654 (9/24) jumped 2 or more arrays on 14 occasions (of which the first 4 are displayed above).

Events that raised warnings: 4, 7, 9:10, 26, 28:32, 54:55, 57:58

Warning: Tag NA-46655 (10/24) jumped through 2 arrays from release to first valid event (Release -> Mutiaur).

Warning: Tag NA-46655 (10/24) jumped through 6 arrays in valid events 17 -> 18 (Rebotel -> Ulong_sandbar).

Warning: Tag NA-46655 (10/24) jumped through 3 arrays in valid events 18 -> 19 (Ulong_sandbar -> Ulong_channel).

Warning: Tag NA-46655 (10/24) jumped through 2 arrays in valid events 21 -> 22 (Siae_corner -> Ulong_sandbar).

Warning: Tag NA-46655 (10/24) jumped 2 or more arrays on 17 occasions (of which the first 4 are displayed above).

Events that raised warnings: 1, 18:19, 22:23, 35:36, 40:41, 51:52, 55:56, 68:69, 72:73

Warning: Tag NA-51644 (11/24) jumped through 2 arrays from release to first valid event (Release -> Mutiaur).

Warning: Tag NA-51649 (12/24) jumped through 3 arrays in valid events 8 -> 9 (Rebotel -> Siae_corner).

Warning: Tag NA-51649 (12/24) jumped through 2 arrays in valid events 9 -> 10 (Siae_corner -> Ulong_sndbar).

Warning: Tag NA-51649 (12/24) jumped through 6 arrays in valid events 10 -> 11 (Ulong_sandbar -> Rebote 1).

Warning: Tag NA-51649 (12/24) jumped through 4 arrays in valid events 15 -> 16 (Mutiaur -> Ulong_sandbar).

Warning: Tag NA-51649 (12/24) jumped 2 or more arrays on 16 occasions (of which the first 4 are displayed above).

Events that raised warnings: 9:11, 16:17, 19:20, 25:26, 28:29, 41:44, 50

Warning: Tag NA-51650 (13/24) jumped through 2 arrays from release to first valid event (Release -> Mutiaur).

Warning: Tag NA-51650 (13/24) jumped through 2 arrays in valid events 59 -> 60 (Mutiaur -> Movement_South).

Warning: Tag NA-51650 (13/24) jumped through 2 arrays in valid events 60 -> 61 (Movement_South -> Mutiaur).

Warning: Tag NA-51650 (13/24) jumped through 2 arrays in valid events 63 -> 64 (Mutiaur -> Movement_South).

Warning: Tag NA-51650 (13/24) jumped 2 or more arrays on 83 occasions (of which the first 4 are displayed above).

Events that raised warnings: 1, 60:61, 64:67, 73:74, 159:160, 163:164, 168:171, 174:175, 234:235, 328, 330, 337:338, 346:347, 424:429, 434:437, 441, 443:444, 446, 452, 454, 470, 472, 525:526, 530:531, 535, 552, 554, 557:558, 560, 562:564, 568, 570:571, 581:582, 586, 588, 593:594, 622, 624, 633:636, 641:642, 649, 653:655, 657:658, 695:696

Warning: Tag NA-51651 (14/24) jumped through 2 arrays from release to first valid event (Release -> Mutiaur).

Warning: Tag NA-60855 (15/24) jumped through 2 arrays from release to first valid event (Release -> Mutiaur).

Warning: Tag NA-60856 (16/24) jumped through 2 arrays from release to first valid event (Release -> Mutiaur).

Warning: Tag NA-60856 (16/24) jumped through 2 arrays in valid events 6 -> 7 (Mutiaur -> Movement_South).

Warning: Tag NA-60856 (16/24) jumped through 2 arrays in valid events 7 -> 8 (Movement_South -> Mutiaur).

Warning: Tag NA-60856 (16/24) jumped through 2 arrays in valid events 17 -> 18 (Mutiaur -> Movement_South).

Warning: Tag NA-60856 (16/24) jumped 2 or more arrays on 5 occasions (of which the first 4 are displayed above).

Events that raised warnings: 1, 7:8, 18:19

Warning: Tag NA-60857 (17/24) jumped through 5 arrays from release to first valid event (Release -> Movement_South).

Warning: Tag NA-60858 (18/24) jumped through 2 arrays from release to first valid event (Release -> Mutiaur).

Warning: Tag NA-60859 (19/24) jumped through 2 arrays from release to first valid event (Release -> Mutiaur).

Warning: Tag NA-60859 (19/24) jumped through 2 arrays in valid events 1 -> 2 (Mutiaur -> Movement_South).

Warning: Tag NA-60859 (19/24) jumped through 2 arrays in valid events 5 -> 6 (Movement_South -> Mutiaur).

Warning: Tag NA-60859 (19/24) jumped through 2 arrays in valid events 6 -> 7 (Mutiaur -> Movement_South).

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Warning: Tag NA-60859 (19/24) jumped 2 or more arrays on 5 occasions (of which the first 4 are displayed above).

Events that raised warnings: 1:2, 6:8

Warning: Tag NA-60860 (20/24) jumped through 2 arrays from release to first valid event (Release -> Mutiaur).

Warning: Tag NA-60860 (20/24) jumped through 2 arrays in valid events 2 -> 3 (Mutiaur -> Movement_South).

Warning: Tag NA-60860 (20/24) jumped through 2 arrays in valid events 9 -> 10 (Movement_South -> Mutiaur).

Warning: Tag NA-60860 (20/24) jumped through 2 arrays in valid events 11 -> 12 (Mutiaur -> Movement_South).

Warning: Tag NA-60860 (20/24) jumped 2 or more arrays on 22 occasions (of which the first 4 are displayed above).

Events that raised warnings: 1, 3, 10, 12, 14, 21, 29, 38:40, 42, 51, 54, 57, 61, 69, 71, 83, 87, 89:91

Warning: Tag NA-60861 (21/24) jumped through 2 arrays from release to first valid event (Release -> Mutiaur).

Warning: Tag NA-60861 (21/24) jumped through 2 arrays in valid events 105 -> 106 (Mutiaur -> Movement_South).

Warning: Tag NA-60861 (21/24) jumped through 2 arrays in valid events 107 -> 108 (Movement_South -> Mutiaur).

Warning: Tag NA-60861 (21/24) jumped through 6 arrays in valid events 588 -> 589 (Rebotel -> Ulong_sandbar).

Warning: Tag NA-60861 (21/24) jumped 2 or more arrays on 23 occasions (of which the first 4 are displayed above).

Events that raised warnings: 1, 106, 108, 589:592, 595, 597, 599:600, 602:603, 605:609, 611:612, 614:615, 618

Warning: Tag NA-60862 (22/24) jumped through 2 arrays from release to first valid event (Release -> Mutiaur).

Warning: Tag NA-60863 (23/24) jumped through 2 arrays from release to first valid event (Release -> Mutiaur).

Warning: Tag NA-60863 (23/24) jumped through 2 arrays in valid events 16 -> 17 (Mutiaur -> Movement_South).

Warning: Tag NA-60863 (23/24) jumped through 2 arrays in valid events 19 -> 20 (Movement_South -> Mutiaur).

Warning: Tag NA-60863 (23/24) jumped through 2 arrays in valid events 37 -> 38 (Mutiaur -> Movement_South).

Warning: Tag NA-60863 (23/24) jumped 2 or more arrays on 12 occasions (of which the first 4 are displayed above).

Events that raised warnings: 1, 17, 20, 38, 41, 54, 58, 75, 79, 99, 103, 117

Warning: Tag NA-60864 (24/24) jumped through 2 arrays from release to first valid event (Release -> Mutiaur).

Warning: Tag NA-60864 (24/24) jumped through 2 arrays in valid events 1 -> 2 (Mutiaur -> Movement_South).

Warning: Tag NA-60864 (24/24) jumped through 2 arrays in valid events 5 -> 6 (Movement_South -> Mutiaur).

Warning: Tag NA-60864 (24/24) jumped through 2 arrays in valid events 6 -> 7 (Mutiaur -> Movement_South).

Warning: Tag NA-60864 (24/24) jumped 2 or more arrays on 34 occasions (of which the first 4 are displayed above).

Events that raised warnings: 1:2, 6:7, 10, 12:13, 15, 19, 21, 23:24, 26:27, 31, 34:35, 38, 41:42, 46, 49, 53:54, 58, 61:62, 64, 67:68, 70, 73, 75:76

M: Filtering valid array movements.

M: Compiling circular times.

M: Saving results as 'actel_explore_results.7.RData'.

M: Producing the report.

M: Drawing individual detection graphics.

M: Process finished successfully.

User interventions:

n # reuse detections?

y # invalidate/expand moves in NA-46647?

y

y # abort invalidation process?

y # invalidate/expand moves in NA-46648?

n

y # abort invalidation process?

y # invalidate/expand moves in NA-46653?

y

y # abort invalidation process?

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```
y # invalidate/expand moves in NA-46654?  
y  
y # abort invalidation process?  
y # invalidate/expand moves in NA-46655?  
y  
y # abort invalidation process?  
y # invalidate/expand moves in NA-51649?  
y  
y # abort invalidation process?  
y # invalidate/expand moves in NA-60857?  
y  
y # abort invalidation process?  
y # invalidate/expand moves in NA-60861?  
y  
y # abort invalidation process?  
y # save results?  
-----  
Function call:  
-----  
explore(tz = 'Pacific/Guam', datapack = NULL, max.interval = 60, minimum.detections = 2, start.time = N  
ULL, stop.time = NULL, speed.method = c('last to first'), speed.warning = NULL, speed.error = NULL, jum  
p.warning = 2, jump.error = 3, inactive.warning = NULL, inactive.error = NULL, exclude.tags = NULL, ove  
rride = NULL, report = TRUE, discard.orphans = FALSE, discard.first = NULL, auto.open = TRUE, save.dete  
ctions = TRUE, GUI = 'never', save.tables.locally = 'FALSE', print.releases = TRUE, detections.y.axis =
```