

Item 4. Monitoring Program Review

RLRAG No. 47 September 3rd 2026



Monitoring Program Review



Aim:

To provide detail of the current monitoring program to allow discussion by the RAG to identify any areas for efficiencies and improvements.

Monitoring Program Review



The last major review of the Rock Lobster Monitoring Program was undertaken in January 2017 and presented at meeting 16 of the RLRAG.

Main outcomes

- Reduction in fixed survey sites from 12 to 8 in the WZ.
- Collection of LF data from fish processors was discontinued

Monitoring Program - Currently



Key components

- Length frequency data – input to stock assessment model
– PRI index
- Tag / recapture – growth used in stock assessment model
- Electronic Monitoring – validation of GC catch & effort data
- Puerulus collectors – interesting but not used in model

Length Frequency Data



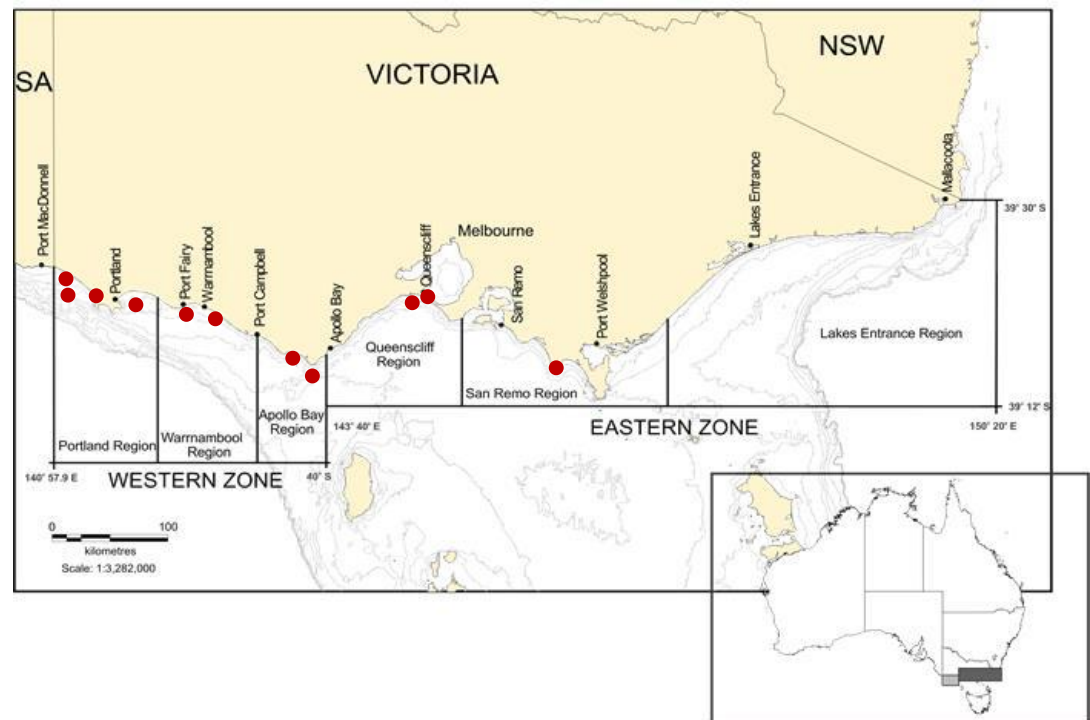
1. On-board Observer program

- At sea collection of lobster length, sex, colour and shell condition
- Record bycatch, discards and TEP interactions
- 2 casual observers (based Queenscliff & Port Fairy)
- Approximately 28 days in WZ and 8 days in EZ (limited opportunity)
- Escape gaps open

Length Frequency Data

2. Fixed site survey program

- WZ since 2002
 - 8 sites
 - Escape gaps closed
 - February
- EZ since 1996
 - Arch Rock 2018
 - 3 sites
 - Escape gaps closed (50% pots)
 - August



Length Frequency Data



3. Voluntary pot sampling program

- Fishers opt to record the length of lobsters from up to 10% of their pots.
- Pots must be marked or randomly selected.
- May apply for an exemption to close escape gaps.
- Currently 4 fishers providing data in the EZ

Length Frequency Data



Costs per lobster measured

- Fixed site surveys cost approx. four times that of observer program.
- Reviewed costing for fixed site surveys - now based on \$1,500/day plus fuel & bait.
- Cost in EZ three times greater than in the WZ due to lower catch rates.

Zone	Collection method	Cost/lobster
East	Observer	\$12.36
	Fixed site	\$50.16
	Voluntary	n.a.
West	Observer	\$4.72
	Fixed site	\$18.67
	Voluntary	n.a.

Length Frequency Data



Sample size

- 5,000 LF measurements shown to provide reliable length-frequency distributions, with low standard error. Adopted as minimum sampling target for WZ. (RLRAG No.16, January 2017)
- 2,500 LF measurements considered realistic for EZ, however these numbers proved to be unachievable.
- It was shown that a smaller sample size of 800 lobsters, measured through a voluntary pot sampling program, could achieve the same accuracy (RLRAG No. 41 , March 2024)

Length Frequency Results– Eastern Zone



Fishing year	Number of units sampled, SRL measured, or SRL tagged													Total lobsters
	Onboard Observer				Fixed site survey				Voluntary Pot Sampling					
	Fishers	Days	Potlifts	Numbers	Fishers	Days	Potlifts	Numbers	Fishers	Days	Potlifts	Numbers		
2017–18	5	41	2316	1206	2	8	402	210	2	40	319	300	1716	
2018–19	7	24	1297	453	3	13	672	341	4	57	632	508	1302	
2019–20	5	17	606	378	3	13	408	809	5	117	936	724	1911	
2020–21	5	20	777	315	4	12	592	447	1	38	114	50	812	
2021–22	5	26	1047	515	2	11	548	410	0	0	0	0	925	
2022–23	2	8	168	75	3	13	606	345	2	21	63	30	450	
2023–24	3	12	327	191	3	16	601	340	2	63	187	111	642	
2024–25	1	8	359	172	2	6	401	328	4	166	771	566	1066	

- Improved participation in voluntary sampling
 - Target (10% of pot lifts; 800 lengths)
 - > 900 lengths in 2025/26 season
- Bias towards San Remo region – Queenscliff region under represented.
- Observer coverage restricted to Queenscliff region
- Fixed site survey – 2 of 3 sites – all 3 sites in 2026

Length Frequency Data– Eastern Zone



For Discussion

- Maintain current data collection methods in EZ.
- Continue to encourage participation in the voluntary pot sampling program. (increased participation in the Queenscliff region is unlikely).
- The opportunity for on-board observers has decreased in the EZ in recent years – fewer fishers, remote areas, multi day trips, low catch rates.

Length Frequency Results– Western Zone



Fishing year	Number of units sampled, SRL measured, or SRL tagged												
	Onboard Observer				Fixed site survey				Voluntary Pot Sampling				Total lobsters
	Fishers	Days	Potlifts	Numbers	Fishers	Days	Potlifts	Numbers	Fishers	Days	Potlifts	Numbers	
2017–18	11	54	4246	5364	6	32	1599	3325	3	55	179	355	9044
2018–19	8	50	3958	6227	6	33	1645	3546	6	101	300	588	10361
2019–20	4	16	1772	1955	7	33	1645	4966	9	215	571	1636	8557
2020–21	6	27	1883	2942	8	33	1667	6128	5	59	175	446	9516
2021–22	7	27	2381	4622	5	32	1598	5102	0	0	0	0	9724
2022–23	5	24	1751	3271	6	32	1598	6621	8	37	78	291	10183
2023–24	4	15	1081	1878	6	24	1204	3530	1	37	111	335	5743
2024–25	8	28	2149	4767	5	28	1405	4937	0	0	0	0	9704

- Collection of LF data has consistently exceeded the 5000 minimum observations in the WZ.
- No voluntary sampling data in 2024-25
- Surveyed 7 of 8 fixed sites in 2024-25 season (all 8 sites this year)

Length Frequency Data– Western Zone



For Discussion

- No change to current sampling protocol is required. Adequate LF data is currently being collected in the WZ.

OR

- Discontinue fixed site surveys in the WZ – cost savings could be used to develop a more strategic observer program to maintain data integrity.
 - Implications for PRI calculation; potential temporal and spatial changes to data; inability to close escape gaps when using an observer program.

Tagging Program



- > 110,000 lobsters tagged since 1992.
- Approximately 10% of tags recaptured
- Tagging provides information on growth which is an important parameter in the stock assessment model.
- Growth less well understood in larger lobsters since there is a bias towards tagging undersize.
- Growth was last reviewed in mid 2019
- Maintaining enthusiasm for reporting tag recaptures over an extended period can be challenging and providing feedback is time consuming.



Tagging Program



Fishing season	Eastern Zone		Western Zone	
	No. released	No. recaptured	No. released	No. recaptured
2014/15	567	9	2130	229
2015/16	26	16	2218	235
2016/17	140	7	2366	313
2017/18	231	17	2403	164
2018/19	298	18	2340	276
2019/20	261		4507	
2020/21	321		3629	
2021/22	272		2650	
2022/23	193		2578	
2023/24	221		1767	
2024/25	170		1126	

- Fewer lobsters tagged in recent years & subsequently fewer recaptures.
- Currently there is a back log of recapture data from the 2019-20 season requiring entry.
- It is important to understand if the current level of tagging is sufficient to detect a change in growth or if a larger, more intensive program is required.

Tagging Program



Recommendation

- Dave to make it a priority to enter and validate the outstanding recapture data.
- Klaas to re-estimate the growth model and determine the sample size required to detect a change in growth.
- Plan to present this to the RLRAG at the first meeting in 2027, noting that the preparation and analysis of the 2025-26 data for the stock assessment will be the priority for the next RLRAG in December.

Electronic Monitoring – Giant Crab Fishery



- Since November 2022, a fisher operating a Giant Crab Access Licence upon which more than 1 tonne has been landed in a single licence year, is required to have electronic monitoring installed on his vessel.
- Primary objective is to provide validation of electronic log book data
- Currently, monitoring equipment is installed on one vessel in the WZ.
- Data review is undertaken on approximately 10% of shots by Archipelago, an external provider, based in Canberra.
- The review provides information on the number of fishing events, the numbers of giant crabs retained and discarded, soak times and bycatch.
- All costs, including equipment installation and data review is covered directly by the fisher concerned and is not part of the cost recovery process.

Electronic Monitoring – Giant Crab Fishery



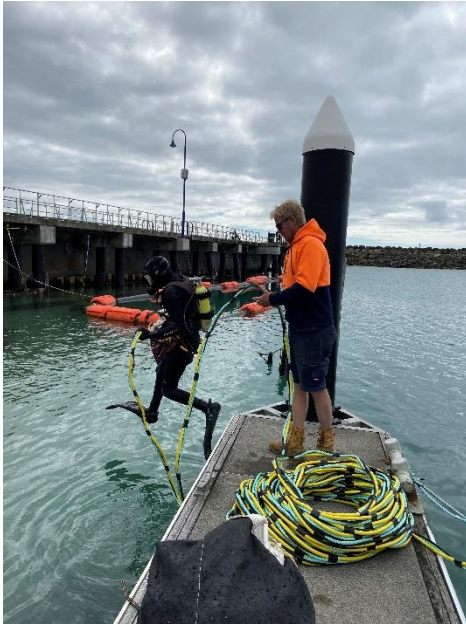
- There is a high level of agreement between the reviewed data and the log book data.
- A trial has commenced to assess the potential of RFID tags to record the soak time of pots.
- The fisher has commenced a voluntary pot sampling program to collect GC length data.

VFA position

To enable validation of commercial log book data, electronic monitoring will continue to be a mandatory requirement in the GC fishery for fishers operating Giant Crab Access Licences, upon which more than 1 tonne has been landed in a single licence year.

Puerulus Monitoring – Apollo Bay

- Crevice collectors
 - March 1994 – Feb 2023

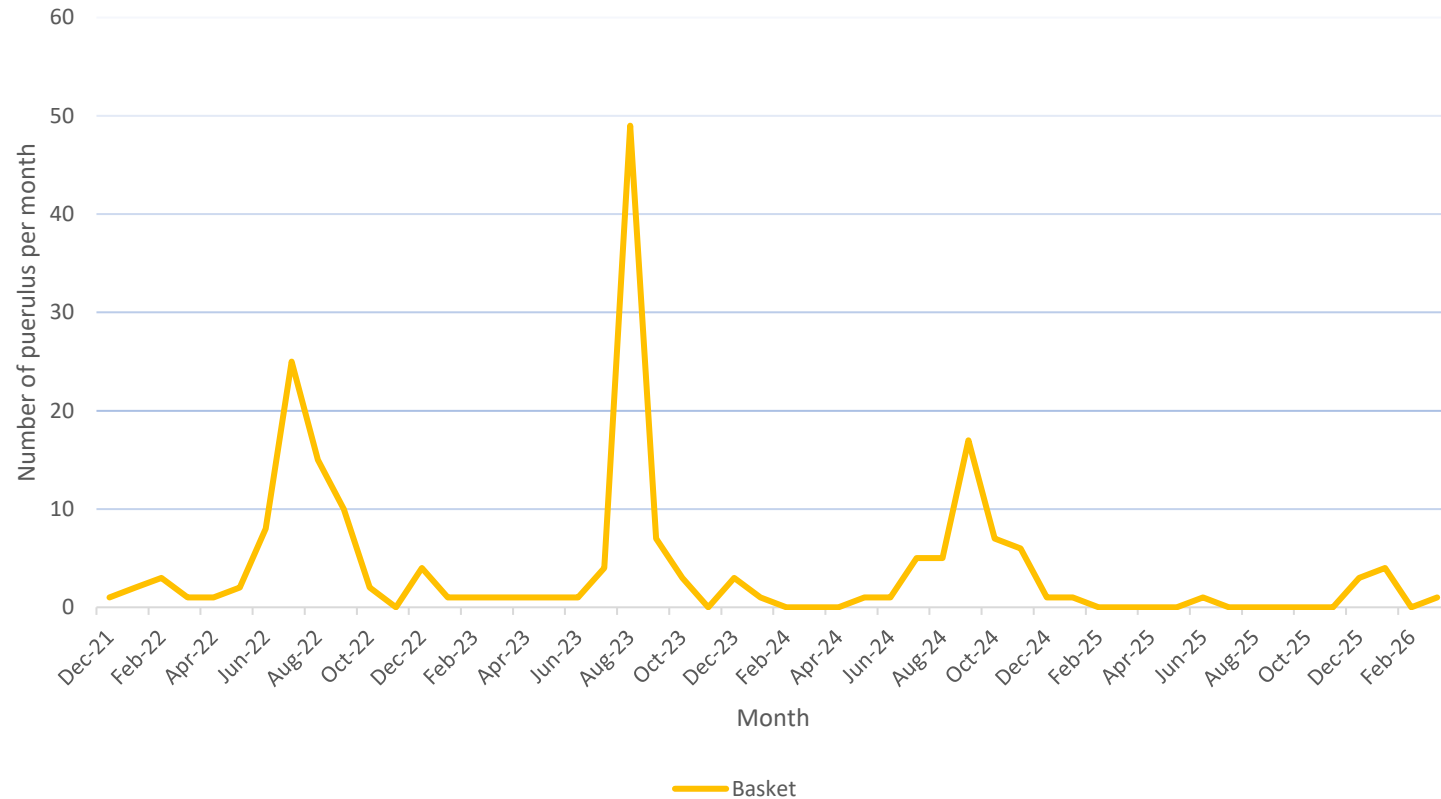


Puerulus Monitoring – Apollo Bay

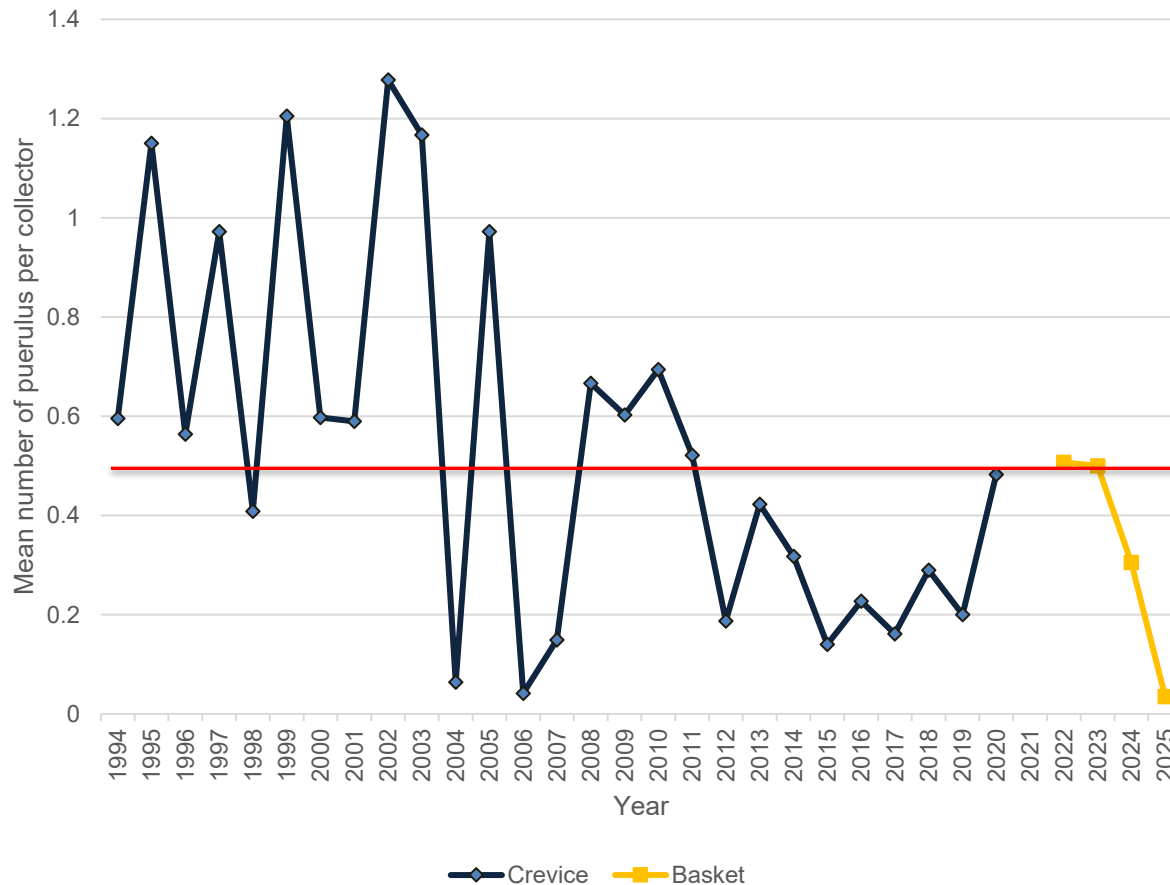
- Basket collectors
 - Initiated Dec 2021
 - Serviced monthly by Otway Ocean Care.



Puerulus Monitoring – Apollo Bay



Puerulus Monitoring – Apollo Bay



Puerulus Monitoring – Apollo Bay



- Puerulus data is not used in the stock assessment model, nor for management decisions, since there is poor correlation between puerulus settlement and subsequent recruitment.
- Otway Ocean Care continue to collect monthly puerulus data.
- Current cost - \$4,200 per annum to support the Landcare co-Ordinator role.
- Data is provided to VFA each month.
- This has been a great community engagement project for Apollo Bay

Puerulus Monitoring – Apollo Bay



Recommendation

Otway Ocean Care should be encouraged to continue collecting puerulus data since it is of general interest to the RL Industry and RAG and provides a level of community engagement, all at minimal cost.

