

# Mutton Birds (Short-Tail Shearwater)



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# Introduction



- Harvested commercially only by the aboriginal community of Tasmania
- Yesteryear meat, oil, down and eggs harvested
- Today only meat and oil are harvested – skun, cleaned and salted birds produced

# Commercial Season

- Commences 27 March annually finishes 30 April
- 7 commercial premises accredited by DPIPWE
- Each shed has at least one meat safety trained person
- Catchers licensed with Wildlife Management Unit





# Life Cycle

- Estimated Adult population 23 million
- Approx 18 million return to Tassie's 167 known rookeries
- Migratory path of Muttonbirds covers 30,000km round trip a year.
  - From Tasmania - NZ - Allueton Islands -Siberia coast – Alaskan Peninsula – Allueton Islands - NSW coast - Victoria coast – Tasmania
- Muttonbirds have been known to live up to 38 years of age



# Breeding Cycle

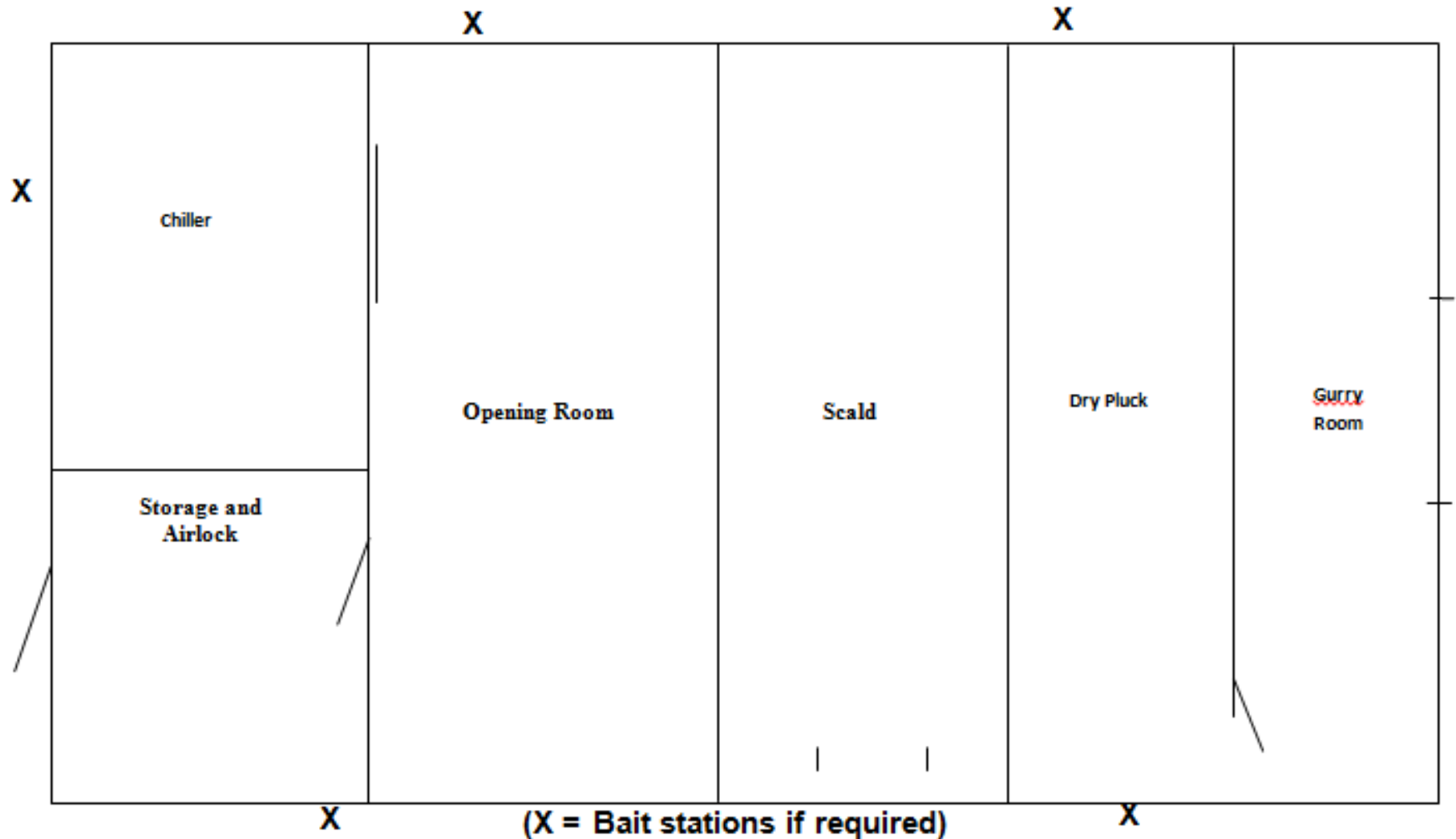
- Breeding season September to end of April
- Birds start breeding at between 5 to 15 years of age
- Pair up for life ....Usually!!!!
- Clean out old burrow or dig new one
- Mating occurs in the burrows
- Female lays a single white egg usually 27-28 November
- Average incubation period 53 days shared by both birds
- Males takes first shift of around 2 weeks - do not leave the nest - nor fed by partner
- Chicks hatch third week in January
- Rapidly put on weight – approx. twice the weight of the adult birds (500 grams)
- Adults begin migration from early April – chicks not fed again
- Chicks rapidly lose weight, grow feathers and depart end of April – May
- Begin their Migration path unassisted by the adult birds.

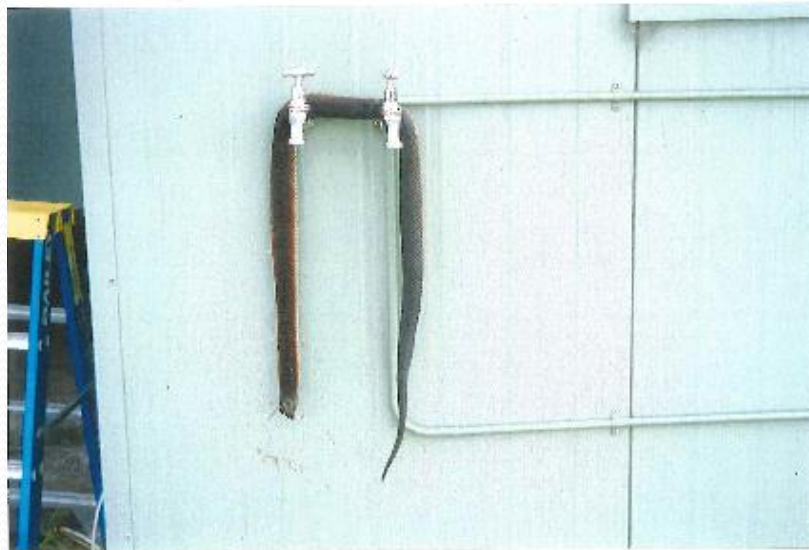
# Harvesting Standards and Legislation

- AS 4464:2007 – Hygienic Production of Wild Game Meat for Human Consumption
- Standard 4.2.3 – Primary Production and Processing Standard for Poultry Meat in the Food Standards Code.
- Tasmanian Primary Produce Safety Act 2011
- Animal Welfare Act and Regulations

# Basic Shed Design

Not to Scale





Bi-catch



## Game Meat Premises – Mutton Bird Chick Takes

Mutton Birds	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Total	96,050	67,100	63,050	86,000	42,700	89,500	105,500	3,300	93,500	81,000

# Muttonbird Processing Steps

- Taken from burrows
  - A/M Inspection
  - Head/neck dislocation
  - Transported to shed
  - Gurried
- NOTE: All production is done with clean sea water.

Cleaned Birds	Skun Birds
Pluck room (rough pluck – feet only removed)	Head/neck, wings, feet removed
Final pluck room (into boiling sea water)	Opening room
*Wiped with hessian bag	*Skun
*Remaining down rubbed off	*Drawn (gutted)
*Opening room – brushed by hand	*PM inspection
*Placed on racks	Final Rinse (sea water)
Chiller for 3-4 hours	*Racked to drain
Brought back into the opening room	Placed in chiller
*Head/neck removed	*Packed
*Opened (eviscerated)	Chiller/Freezer
*wings removed	
* P/M inspection	* Areas where contamination may occur
Final rinse (clean sea water)	
*Racked to drained	
Chiller	
*Packed	
Chiller/Freezer	

# Microbiological Testing

- Tested under Australian Standard for Construction of Premises and Hygienic Production of Poultry Meat for Human Consumption Appendix A Microbiological Testing for Process Monitoring in the Poultry Meat Industry Guidelines
- Method A – Rinse Technique AS1766.3.2.6.2 for frozen birds.



TVC MICRO COUNTS /sq.cm									
<b>2004</b>	5508 S	2359 C	DNO	707 C	635 C	6259 C	DNO	8649 S	
<b>2005</b>	3232 S	1618 S	DNO	44133 S	193470 S	DNO	DNO	20916 S	
	1492 C	1167 C		366 C	6975 C		135 S	5752 S	
								42.15 S	
<b>2006</b>	70.36 C	151	DNO	78.15 C	1697 C	45 S	162 C	47.16 S	
	2962 C				2095 C				
					TNTC C				
					TNTC C				
					545868 C				
					731614 C				
<b>2007</b>	107 S	608 C	NL	195 C	344 C	26.2 S	105 C	785 S	
				145 S					
<b>2008</b>	152 C	152 C	NL	274 C	533 C	25 S	DNO	180 S	
								472 S	
<b>2009</b>	160 C	DNO	NL	238 C	432 C	35 S	DNO	36 S	
<b>2010</b>	17 C	DNO	NL	327 C	DNO/G82	27 S	DNO	20.81 S	13788 C
									366 C
<b>2011</b>	19 C	DNO	NL	111 C	84 C	18 S	DNO	DNO	1735 C <b>Nylon</b>
									304 C <b>Perspex</b>
<b>2012</b>	428 C	DNO	NL	526 C	NL	66 S	DNO	140 S	5618 C
<b>2013</b>	114 C	DNO	NL	6939 C	NL	169 S	355 C	68 S	125 C
<b>2014</b>	32C	DNO	NL	DNO	NL	131 S	DNO	DNO	DNO
<b>2015</b>	13 C	17 S	NL	848 C	NL	8 S	DNO	61 S	179 C
	9 S								
<b>2016</b>	31 C	32 C	NL	89C	NL	283 S	DNO	102 S	146 C

DNO Did Not Operate
S = Skun Birds
C = Cleaned (plucked) Birds
NL = Not licensed

Category	TVC/sq cm
Excellent	<5,000
Good	5,000 -50,000
Acceptable	50.000 - 500,000
Marginal	500,000 - 1,500,000

E.COLI MICRO COUNTS /sq.cm									
<b>2004</b>	3.15 S	0.0 C	DNO	0.0 C	0.00 S	0.00 C	DNO	2.36 s	
<b>2005</b>	2.77 S	0.54 C	DNO	0.25 S	0.57 S	DNO	DNO	1.99 S	
	1.12 C	0.39 C		0.75 C	0.87 C		0.34 S	1.44 S	
								1.69 S	
<b>2006</b>	0.00 C	0.0 C	DNO	0.0 C	0.00 C	0.00 S	0.00 C	0.00 S	
	0.74 C				0.42 C				
					3.61 C				
					2.28 C				
					1.20 C				
					0.00 C				
<b>2007</b>	0.36 S	0.00 C	NL	0.39 C	0.00 C	0.00 S	0.00 C	0.00 S	
				3.09 S					
<b>2008</b>	0.76 C	0.00 C	NL	0.39 C	0.38 C	0.00 S	DNO	0.47 S	
								0.00 S	
<b>2009</b>	0.00 C	DNO	NL	0.00 C	0.00 C	0.00 S	DNO	0.00 S	
<b>2010</b>	0.00 C	DNO	NL	0.00 C	DNO/G82	0.00 S	DNO	0.00 S	1.62 C
									0.00 C
<b>2011</b>	0.37 C	DNO	NL	0 C	0 C	0 S	DNO	DNO	0 C
									0 C
<b>2012</b>	0.0 C	DNO	NL	0.0 C	NL	0.0 S	DNO	0.0 S	0.0 C
<b>2013</b>	0.0 C	DNO	NL	0.0 C	NL	4.67	0.82 C	0.0 S	0.0 C
						0.44			
<b>2014</b>	0.0C	DNO	NL	DNO	NL	DNO	DNO	DNO	DNO
<b>2015</b>	0.33 C	0.0 C	NL	0.0 C	NL	0.0 S	DNO	0.0 S	0.0 C
	0.0 S								
<b>2016</b>	0.0 C	0.0 C	NL	0.0 C	NL	3.45 S	DNO	0.34 S	1.09 C

DNO Did Not Operate

S Skun Birds

C Cleaned (plucked) Birds

NL Not licensed

# Food for thought

- Still using the traditional aboriginal methods
- No plastic or mesh gloves used
- Plenty of actual physical handling of product
  - (10 for cleaned birds)
  - (5 for skun birds)
- No hand washing between handling birds
- Nylon opening boards
- So how come the micro's are so good?
- What is the difference in this operation?
- Maybe the use of clean sea water

# Cooking

- Cleaned birds – Roasting, grilled, fried, BBQ
- Skun Birds – as above also be curried and stewed
- Salted Birds – stews and curries
- Cooking in the outback – ASK CLIVE!!!!