

FOR INFORMATION OR COMMENT

SWFSPP Annual Meeting 2024

Agenda Item 4.3

last updated: 16 September 2024

Prepared by WC Janson

WA COORDINATOR REPORT 2023-24 year**RECOMMENDATION**

1. That the SWFSPP Steering Committee:
 - a. NOTE the report on SWFSPP activities undertaken by Western Australia during the 2023-24 financial year

BACKGROUND

This report details the activities undertaken by Western Australia during the 2023-2024 FY.

In Western Australia surveillance by fly trapping occurs at locations in Wyndham, Broome, Geraldton and Fremantle. These locations target the most likely points of entry and early establishment of SWF. (Close to ports with returning livestock vessels from destinations where SWF is endemic and close to livestock yards).

In Western Australia targeted livestock wound surveys for myiasis occur at Broome Common registered export facility near Broome port. The cattle represent a subset of the cattle in the Kimberley region of WA. This is undertaken concurrently with cattle tick inspections. Despite having been treated with chemical that would kill flies prior to inspection it is believed any established infestation would remain evident.

Dr. Will Janson is the WA coordinator for the SWFSPP 2023-2024 FY. DPIRD WA continues to meet surveillance and reporting obligations as outlined in the 2022-2025 SWFSPP Business Plan and Standard Operating Procedures.

DISCUSSION**ADULT FLY TRAPPING**

During the 2023-2024 FY, trapping was completed at the following locations:

- Kununurra (traps located at the holding yards supplying the Wyndham port.)
- Broome (traps located at Broome Common Export Depot supplying the Broome port.)
- Geraldton (traps located at cattle yards approximately 5km from Geraldton port.)

- Fremantle (traps located at Muchea sale yards. The sale yards are approximately 70km from Fremantle port and service livestock from throughout the state)

Due to regional staff shortages, the Geraldton trap location continues to be collected every 30 days instead of after 10 days. Ten-day collections will be resumed when the Geraldton office successfully recruits a replacement veterinary officer. The site is not humid and sample collections are small (<1000 flies). Sample identification has not been impacted.

Collections from traps are sent to the DPIRD Diagnostic and Laboratory Services (DDLS) in Perth for analysis by entomologists. Fly numbers of less than 1000 (approximately 14g) per collection are morphologically examined and individually counted. The qPCR is used for collections of fly numbers greater than 1000.

Table 1. Data collated for the 2023-2024 trapping season.

Location	<i>Calliphoridae</i> Family not including <i>C. Bezziana</i> (OWSWF) & <i>C. hominivorax</i> (NWSWF)*	<i>Chysomya</i> genus but not <i>C. bezziana</i> (OWSWF)^	<i>Sarcophagidae</i> but not <i>Wohlfahrtia magnifica</i> ~
Wyndham	1620	1206	21
Broome	542	205	197
Geraldton	30	6	13
Muchea	763	90	0

*The presence of 2955 members of the **Calliphoridae** family is encouraging as the New World SWF species are in this family. If we assume trapping is equally effective within the family, then we could expect surveillance to detect NWSWF if locally established.

^ The presence of 1507 members of the **Chysomya** genus is encouraging as the Old World SWF species is in this genus. If we assume trapping is equally effective within the genus, then we could expect surveillance to detect OWSWF if present.

~ The presence of 231 members of the **Sarcophagidae** family is encouraging as the spotted flesh fly (*Wohlfahrtia magnifica*) is in this family. If we assume trapping is equally effective within the family, then we could expect surveillance to detect spotted flesh fly if present. Laboratory reports specifically noted that the flies were not *Wohlfahrtia magnifica*

Table 2. Dipterid families trapped all sites by financial year.

Family	17/18	18/19	19/20	20/21	21/22	22/23	23/24
Asilidae	1						
Bibionidae	1						
Calliphoridae	3292	5680	3798	2624	3924	2372	2535
Carnoidea							1818
Cchloropidae					31		
Cecidomyiidae		4	4				
Ceratopogonidae			22	4	230		
Chloropidae	3			7	147	16	178
Coelopidae		3				42	
Culicidae		2	1	5			
Drosophilidae	3						
Formicidae					50	374	452
Lauxaniidae		2					
Muscidae	1976	2423	10749	9743	34369	10107	847
Mycetophilidae		9					
Oestridae		2					
Otitidae	33659	59313	88911	64702	146738	70719	29750
Phoridae	1	21	20	40	40	1	
Psychodidae	1	20	4	7	68	4	
Sarcophagidae	1613	671	398	302	475	355	178
Scatopsidae	13				546	1	
Sciaridae	1	78	12	10	3		
Sepsidae	7	51	17		2		
Tested via PCR							29 000
Total	44691	77414	114664	92229	187563	87746	67730
% Calliphoridae	7%	7%	3%	3%	2%	3%	3.7%*

* = With PCR exact species analysis is not performed, this alters the measurable composition when determining the percentage of indicator family trapped.

Table 3. Bi-catch in FY 2018 -2024 (Insects not part of Diptera Order)

Order	Number	Accessions
Apoidea	90	2
Araneae	41	27
Blattodea	3	3
Choloptera	2	1
Coleoptera	219	112
Helicoidea	1	1
Hemiptera	21	21
Hymenoptera	56367*	103
Lepidoptera	76	40
Lepidotera	3	1
Nematocera	26	11
Orthoptera	16	9

*An ant invasion at Broome Common resulted in 50,000 ants in a trap. Ant granules have been used where ants have previously impacted the traps (Wyndham and Broome). Hydramethylnon is the active ingredient used and appears safe. It is not used where stock have direct access. See MSDS <http://npic.orst.edu/factsheets/hydragen.pdf>.

Table 4. Total number of insects trapped by location and FY year.

Year	2017	2018	2019	2020	2021	2022	2023	2024
Location								
Wyndham	3156	2134	3466	23578	3315	22860	5378	34871
Broome	5873	32727	58233	69369	59858	8184	18196	14842
Port Hedland				241	76			
Geraldton	1075	8588	11228	19128	24379	32034	62684	2377
Fremantle	123	1865	4478	2358	4601	135485	6646	1908
All sites	10227	45314	77405	114674	92229	198563	127780	53908

Summary of active trapping surveillance

Of the potential 144 trapping events (4 locations with 3 traps at each trapping location for 12 months of the year) there were 132 trapping events where traps were set, collected, insects caught and identified. The remaining 12 potential trapping events were not successful for various reasons including traps falling in a storm, no flies trapped or lack of staff resourcing to set trap.

Of the 132 successful trapping events for FY 2023-2024 there were 53 908 insects caught and identified. Trap catches of greater than 1000 flies were not identified by species as PCR was conducted to exclude SWF.

The surveillance was effective for flies from within the same family as the target species.

SWF was excluded from all trap catches.

1. TARGETED MYIASIS INSPECTIONS

Targeted myiasis inspections in Western Australia take place at Broome Common holding yards (W131) and occur concurrently with tick inspections. During times where cattle do not travel to Broome Common, tick inspections are conducted on 5 nominated stations.

Most of the targeted myiasis inspections occurred between August and November 2023. In December 2022 the Fitzroy River Bridge was destroyed in floods disconnecting the West Kimberley from the East Kimberley. In December 2023, the bridge was officially re-opened. Only a small number of inspections occurred between December 2023 and March 2024 due to the wet season preventing cattle movements.

Due to a change in staff, targeted myiasis inspections did not occur between April and June 2024. A new inspector has been appointed to continue targeted myiasis inspections for FY 2024-2025.

The targeted myiasis surveillance did not detect any maggots for submission during FY 2023-2024.

Table 5. Number of cattle inspected for myiasis at Broome Common over the past six financial years.

Month	18/19	19/20	20/21	21/22	22/23	23/24
July	3574	6076	1715	4030	4119	
August	1501	5722	1573	2655	1506	167
September	619	3166	550	2895	1270	2542
October		1190	812	1903	714	5757
November		1030	495	988	629	1132
December					*	138
January	16				*	
February				25	*	
March	375				*	
April	807	1849	329	576	*	
May	5906	2969	3022	2051	*	
June	6282	2497	3287	129	1101	
Total	19080	24499	11783	15252	9339	9736

* Broome Common was not open for livestock receivals Jan – March 2023.

Summary of targeted myiasis surveillance

Targeted myiasis inspections took place at Broome Common holding yards (W131) in cattle originating from across the Kimberley.

9736 cattle were inspected from August to December 2023.

No myiasis was identified in cattle during these inspections.

2. DESCRIBE AND ASSESS PASSIVE SURVEILLANCE

SWF kits and information were distributed at producer meetings and on station visits during the 2023-2024 FY. SWF (both species) was excluded from 3 animal disease investigation submissions and 1 human disease investigation submission for the 2023-2024 FY.

SWF continues to be discussed as a differential diagnosis for sheep myiasis when DPIRD is present at agricultural shows and events. Stakeholders are reminded to report to their private veterinarian or DPIRD if they observe clinical signs consistent with SWF in their animals.

Table 6 Total submissions to DDLS for myiasis for 2023-2024

Year	Species	Reason for investigation	Finding	Outcome
10 October 2023 AS-23-3262	Ovine	Found dead, Skin lesions Welfare	Myiasis, <i>Lucilia sericata</i>	Managed by DPIRD
13 October 2023 AS-23-3348	Ovine	Skin lesion Welfare	Myiasis, <i>Lucilia sericata</i>	Managed by DPIRD
28 March 2024 ES-24-0867	Human	Human lower leg chronic wound	Calliphoridae Larvae SWF PCR Negative	Case managed by Kununurra hospital SWF diagnostic examination DPIRD
7 June 2024 AS-24-1703	Ovine	Weakness/depression Welfare	<i>Lucillia serricata</i>	Managed by DPIRD

Summary of passive surveillance events

Reporting of myiasis is encouraged especially in the tropical north of WA.

All maggot submissions to the department's laboratory are morphologically examined to exclude SWF.

DPIRD encourages the Department of Health to submit human myiasis cases.

A total of three southern sheep myiasis collections and one northern human collection were examined this year and SWF excluded.

3. FINANCIAL IMPLICATIONS

The department's laboratory services has agreed to align their charges for diagnosis to the current SWF examination subsidy this year.

4. CONSULTATION/COMMUNICATION

DPIRD has published a web page on SWF. <https://www.agric.wa.gov.au/livestock-biosecurity/screw-worm-fly>. This site provides a link to the AHA SWFSPP.

Northern Australian Biosecurity Strategy (NABSnet) Master Class (March 2024) - DPIRD gave a presentation on Screw Worm Fly. Synthetic wound models were made as part of a practical demonstration to participants. Participants were asked to use an Animal Health Australia Maggot Surveillance Kit, to collect the required sample, complete the submission sheet and safely pack the samples.

5. NEXT STEPS/ACTIONS

Jurisdiction coordinators are waiting for further instruction/information on the transition to AUSPestCheck. The draft Data Management and Use Policy for SWFSPP has not been reviewed since initial feedback was provided to AHA at the end of 2023.

FEEDBACK

Q1 My organisations needs and expectations of the SWFSPP are being met.

Strongly agree	Agree	Undecided	Disagree	Strongly disagree
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Comments:

Q2 The outputs of the SWFSPP such as the brochure, poster and annual report in the Animal Health in Australia report are credible and robust.

Strongly agree	Agree	Undecided	Disagree	Strongly disagree
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Comments:

Q3 The SWFSPP satisfies the surveillance data and reporting needs of my organisation (e.g. contributes to and/or supports policy development and decision making).

Strongly agree	Agree	Undecided	Disagree	Strongly disagree
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Comments:

Q4 Animal Health Australia is managing the Screw Worm Fly Surveillance and Preparedness Program effectively/satisfactorily.

Strongly agree	Agree	Undecided	Disagree	Strongly disagree
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Comments: Nil