

FOR INFORMATION OR COMMENT
[Use term appropriate to the paper]

SWFSPP Annual Meeting 2020
Agenda Item 2.1
[last updated: 30 November 2021]
Prepared by [initial and surname of author(s)]

WA DPIRD AGENCY COORDINATOR REPORT 2020-21 year

RECOMMENDATION

That the SWFSPP Steering Committee **NOTE**

- a. Port Hedland winter surveillance has been dis-established
- b. Trapping Surveillance appears to be effective at all sites with good numbers of Calliphoridae trapped.

BACKGROUND

DPIRD commenced targeted lure trap surveillance for SWF in WA in July 2015. This activity was previously conducted at the ports by DAWR.

DPIRD also collects data from cattle near the Broome port and passive surveillance of cattle through border checkpoints and opportunistically whilst conducting inspections for other purposes.

DISCUSSION

1. ADULT FLY TRAPPING

Lure traps have been located at

- Wyndham port

Sites have been relocated

- Site 1. From close to cattle yards at the port to James Hassett GPS S15.30'30.38, E128.10'23.56
- Site 2. From road on way into port, 600m from cattle yards to Wyndham Boat shed GPS S15.26'59.34 E128.6'10.62
- Site 3. From 12km from port, in paddock with resident cattle to Wyndham Croc Farm GPS S15.26'53.74 E128.6'38.20

- Broome port

- All traps are located at Broome Common Export Depot which houses cattle year round and is 15km from the port.

- Geraldton port

- All traps located to cattle yards 5 km from the port.

- Port Hedland

- Drovers rodeo, 4 km North of the port – now dis-continued

- Fremantle

- All traps relocated to Muchea sale yards.

Laboratory reports for FY 21 were collated in MS Access. The class, order, family, genus was assigned for all trapped insects where this could be determined. Table 1a and 1b are derived

from these data. Table 1a shows the total *Dipterids* trapped and the numbers in the families and genera of interest for FY 2017 - 2021.

Table 1a Table of insects identified in WA trapping surveillance 2017-2021 FY`` Data available as at 24 September 2021. Excludes submissions tested by in house PCR.

Location	<i>Insecta</i>	<i>Diptera</i>	<i>Calliphoridae</i> family but not <i>Cochliomyia hominivorax</i> (NWSWF) and not <i>Chrysomya bezziana</i> (OWSWF)*	<i>Chrysomya</i> genus but not <i>C. bezziana</i> (OWSWF)^	<i>Sarcophagidae</i> but not <i>Wohlfahrtia magnifica</i> ~
All WA sites	145308	94493	4133	4017	321
Broome	110008	59858	1740	1686	239
1	105015	54865	1603	1565	200
2	3971	3971	108	93	29
3	1022	1022	29	28	10
Geraldton	24979	24963	58	32	5
1	9292	9290	30	26	
2	14288	14285	17	5	
3	1399	1388	11	1	5
Freemantle	4605	4601	60	44	6
1	603	600	26	14	1
2	323	322	3	3	2
3	3679	3679	31	27	3
Wyndham	5137	4995	2272	2253	64
1	2819	2702	651	649	29
2	805	785	413	396	24
3	1513	1508	1208	1208	11
Port Hedland	579	76	3	2	7
1	474	41	1	1	
2	70	19			2
3	35	16	2	1	5

* The presence of 4000 members of the *Calliphoridae* family is encouraging as the New- and Old- World SWF species are in this family. If we assume trapping is equally effective within the family then we could expect surveillance to detect SWF if present. However, most of these were in the *Chrysomya* genus, the same genus as Old World SWF. If we assume trapping is equally effective within the genus then we could expect surveillance to detect OWSWF if present.

~* The presence of 321 members of the *Sarcophagidae* family is encouraging as the spotted flesh fly (*Wohlfahrtia magnifica*) should have been detected if present. If we assume

trapping is equally effective within the family then we could expect surveillance to detect spotted flesh fly if present. Lab reports specifically noted that the flies were not *Wohlfahrtia magnifica*.

Table 1b Table of insects identified in WA trapping surveillance 2017-2021 FY`

Location	Insecta	Diptera	<i>Calliphoridae</i> family but not <i>Cochliomyia hominivorax</i> (NWSWF) and not <i>Chrysomya bezziana</i> (OWSWF)*	<i>Chrysomya</i> genus but not <i>C. bezziana</i> (OWSWF)^	<i>Sarcophagidae</i> but not <i>Wohlfahrtia magnifica</i> ~
All WA sites	399955	345513	18205	13686	3828
Broome	278677	226060	8027	7448	1539
1	262397	209825	7424	7001	1268
2	9036	9029	197	143	155
3	7244	7206	406	304	116
Geraldton	66838	66238	2380	439	514
1	19640	19311	1224	179	224
2	38167	38140	934	186	229
3	9031	8787	222	74	61
Freemantle	13541	13427	597	417	22
1	7047	6985	382	257	15
2	1330	1284	29	17	3
3	5164	5158	186	143	4
Wyndham	39973	39471	7162	5354	1719
1	8939	8554	4503	2733	1034
2	2571	2486	1341	1305	450
3	28463	28431	1318	1316	235
Port Hedland	926	317	39	28	34
1	632	112	14	12	16
2	202	146	18	14	11
3	92	59	7	2	7

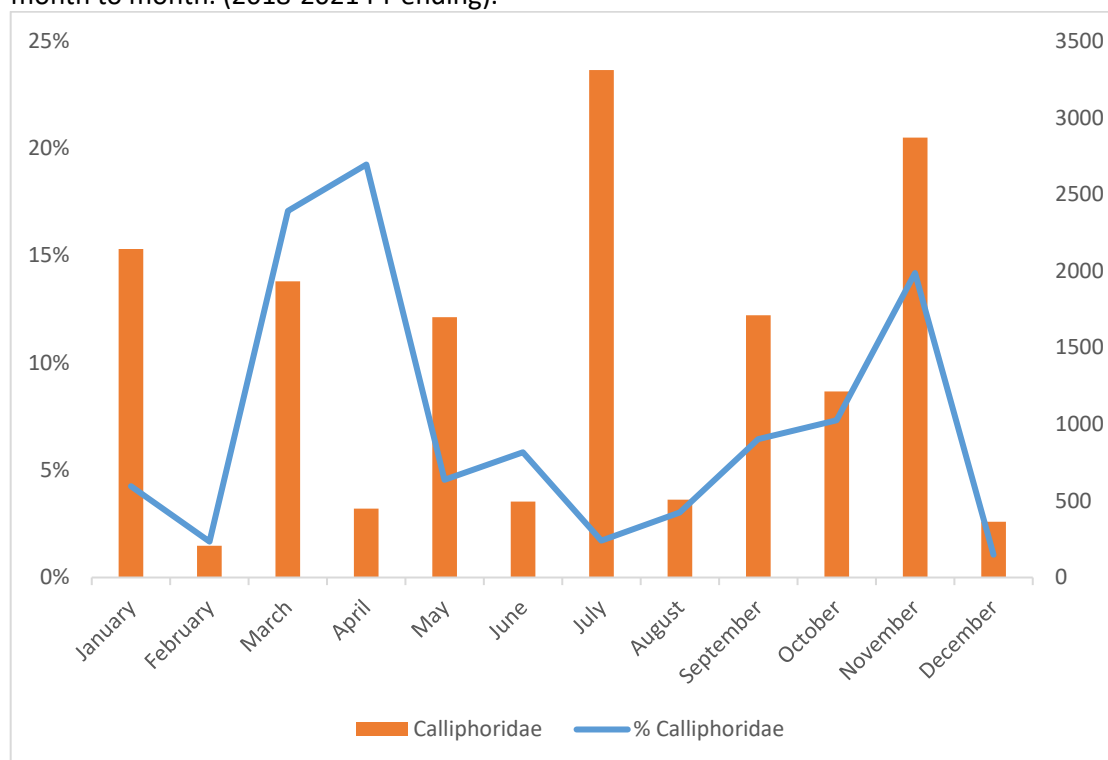
Table 2 shows the dipterids that were trapped. *Calliphoridae* (same family as SWF) make up 3 to 8% of trapped flies.

Table 2 Dipterid families trapped all sites

Family	2018	2019	2020	2021
Asilidae	1			
Bibionidae	1			
Calliphoridae	3292	5680	3798	4133
Cecidomyiidae		4	4	0
Ceratopogonidae			22	4
Chloropidae	3			46
Coelopidae		3		0
Culicidae		2	1	5
Drosophilidae	3			0
Lauxaniidae		2		0
Milichiidae	4120	9135	10728	14953
Muscidae	1976	2423	10749	10083
Mycetophilidae			9	0
Oestridae		2		0
Otitidae	33659	59313	88911	64864
Phoridae	1	21	20	40
Psychodidae	1	20	4	34
Sarcophagidae	1613	671	398	321
Scatopsidae	13			0
Sciaridae	1	78	12	10
Sepsidae	7	51	17	0
Total	44691	77405	114673	94493
% Calliphoridae	7%	7%	3%	4%

Month of trapping

Figure 1 shows that trapping numbers for *Calliphoridae* and percentage *Calliphoridae* from month to month. (2018-2021 FY ending).



Trap performance

The traps are in good order, following maintenance and replacement of broken parts. Bi-catch is low- see Table 3.

Table 3 bi-catch in FY 2018 -2021

Order	Family	number
Apoidea	Crabronidae	90
Araneae	ARANAE	41
BLATTODEA		1
BLATTODEA	Blattidae	1
BLATTODEA	Ectobiidae	1
Coleoptera		4
Coleoptera	Anobiidae	1
Coleoptera	Anthicidae	5
Coleoptera	Cerambycidae	3
Coleoptera	Cleridae	2
Coleoptera	Coccinellidae	2
Coleoptera	Curculionidae	5
Coleoptera	Dermestidae	5
Coleoptera	Elateridae	5
Coleoptera	Histeridae	14
Coleoptera	Nitidulidae	6
Coleoptera	Platypodinae	3
Coleoptera	Scarabaeidae	88
Coleoptera	Silvanidae	26
Coleoptera	Staphylinidae	2
Coleoptera	Staphyllinidae	1
Coleoptera	Tenebrionidae	29
Coleoptera	Tephritidae	18
Formicidae	Hymenoptera	118
Helicoidea	Helicidae	1
Hemiptera	Alydidae	1
Hemiptera	Aphididae	2
Hemiptera	Cicadellidae	10
Hemiptera	Lygaeidae	1
Hemiptera	Pentatomidae	4
Hemiptera	Psyllidae	2
Hemiptera	Rhyparochromidae	1
Hymenoptera		5
Hymenoptera	Apidae	278
HYMENOPTERA	Formicidae	53581
hymenoptera	Sphecidae	1
Hymenoptera	Typhiidae	2
Lepidoptera		60
Lepidoptera	Noctuidae	19
Nematocera	Chironomidae	26
Orthoptera	Blatellidae	16

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>.

Performance by location

2021 was our second-best year to date for total dipterids trapped with all sites trapping good numbers.

Table 4 Table of total insects trapped by location and FY year

Location	2017	2018	2019	2020	2021
All sites	10227	45314	77405	114674	94493
Broome	5873	32727	58233	69369	59858
Freemantle	123	1865	4478	2358	4601
Geraldton	1075	8588	11228	19128	24963
Port Hedland				241	76
Wyndham	3156	2134	3466	23578	4995

Has the Screw-Worm Fly Surveillance and Preparedness Project satisfied surveillance data and reporting needs?

The surveillance appears to be effective for the target species.

2 TARGETED MYIASIS INSPECTIONS

Inspections of the hospital pen at Broome Common is undertaken when the traps are collected and set or as part of tick inspection process.

Table 5a Table of the number of inspections of cattle for wounds and myiasis over the past 3 FY and total wounds observed

Month	2019	2020	2021	Wounds observed
July	6282	2497	3287	3
August	3574	6076	1715	15
September	1501	5722	1573	13
October	619	3166	550	4
November		1190	812	2
December		1030	495	1
January	16			0
February				
March				
April	375			0
May	807	1849	329	0
June	5906	2969	3022	4
Total	19080	24499	11783	42

The number of wounds observed has declined. The practice of keeping wounded animals in a hospital pen has been discouraged for welfare reasons. No wounds have had fly maggots. Covid and changes in cattle movement mean less cattle were inspected in FY 2021.

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3 DESCRIBE AND ASSESS PASSIVE SURVEILLANCE

SWF kits and information were distributed at producer meetings and on station visits. They have also been distributed with producer post mortem kits.

Passive surveillance occurs as a by-product of tick inspections, NAMP surveillance, general disease investigations, and welfare investigations.

SWF was excluded from three submissions. Table 6 shows the host and accession details.

Table 6 Table of maggot submissions for SWF exclusion

Species	date	Finding	Labrefno	Disease	Outcome
Sheep	2/9/2020	Calliphora spp	AS-20-2435	Cutaneous myiasis.	SWF ruled out
Sheep	25/9/2020	Lucilia caprina	AS-20-2712	Cutaneous myiasis.	SWF ruled out
Sheep	13/10/2020	Calliphora species	AS-20-2984	Cutaneous myiasis.	SWF ruled out

4 FINANCIAL IMPLICATIONS

nil

5 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

6 NEXT STEPS/ACTIONS

[Briefly describe proposed next steps or actions. If none are proposed or required state this].

Attachment A: *Title of attachment in full*

Attachment B: *Title of attachment in full*

FEEDBACK

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

Strongly agree **Agree** Undecided Disagree Strongly disagree

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

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

Comments:

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

Strongly agree **Agree** Undecided Disagree Strongly disagree

Comments: