

Standard Operating Procedure #6

Datasheets

Version 1.01 (April 30, 2021)

Change History

New Version #	Revision Date	Author	Changes Made	Reasons for Change	Previous Version #
1.01	4/30/2021	Amanda McCutcheon/ Kelly Kozar	Updated datasheets	After first field season, changes were made to data collection and datasheets needed to be updated accordingly.	1.0

Only changes in this specific SOP will be logged here. Version numbers increase incrementally by hundredths (e.g., version 1.01, version 1.02) for minor changes. Major revisions should be designated with the next whole number (e.g., version 2.0, 3.0, 4.0). Record the previous version number, date of revision, author of the revision, changes made, and reason for the change along with the new version number.

Purpose

This SOP describes datasheets to be used in the field for the Pacific Island Network Anchialine Pool Monitoring Protocol.

Anchialine Pools Animals – Pool Sketch and Tide Information

Park: _____ Pool: _____ Date: _____

Crew: _____

Survey Start Time: _____ End Time: _____ Time of High Tide: _____ Height at High Tide: _____

Weather: Sunny ($\geq 75\%$ sun), Partly cloudy ($\geq 25\%$ and $\leq 75\%$ sun), Mostly cloudy ($\leq 25\%$ sun), Overcast, or Rain

Sketch

Surface area estimate: _____ sq. meters

Mark circumference distances; label sub-pools (if any), key features, directions (north, mauka & makai); transect location, label densitometer reading locations; trap deployment location, water quality sonde deployment location; photo point locations, and major landmarks.

Figure SOP 6.1. Anchialine pool datasheet.

Anchialine Pools Animals – Odonates and Vegetation

Park: _____ Pool: _____ Date: _____

Observers: _____

Odonates (10 minutes) Start Time: _____ End Time: _____ Observer: _____

Weather (circle):

Sunny (≥ 75% sun)	Partly cloudy (≥ 25% and ≤ 75% sun)	Mostly cloudy (≤ 25% sun)	Overcast	Rain
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Taxa (damselflies)	#		
	M	F	U
<i>Enallagma civile</i> (Familiar Bluet)			
<i>Ischnura ramburii</i> (Rambur's forktail)			
<i>Megalagrion xanthomelas</i> (Orangeblack Hawaiian Damselfly)			

Taxa (dragonflies)	#		
	M	F	U
<i>Pantala flavescens</i> (Globe Skimmer)			
<i>Anax junius</i> (Common Green Darner)			
<i>Orthemis ferruginea</i> (Roseate Skimmer)			
<i>Tramea lacerata</i> (Black Saddlebags Dragonfly)			

Riparian Vegetation (Estimate species cover as % of pool circumference in a 1.5 m band around pool.)

Coverage Categories: Trace (<1%), 1-25%, 25-50%, 50-75%, or 75-100%

Thespesia populnea (milo)	%	%	%	%	%
Cenchrus setaceus (fountain grass)	%	%	%	%	%
Sesuvium portulacastrum ('ākulikuli)	%	%	%	%	%
Prosopis pallida (kiawe)	%	%	%	%	%
Cyperus javanicus ('ahu'awa)	%	%	%	%	%
Batis maritima (pickleweed)	%	%	%	%	%
	%	%	%	%	%
	%	%	%	%	%

Taxa Observed (not otherwise recorded)

(E.g. Thiariid snails, identified organisms not caught, nor observed within timed survey, etc.)

Figure SOP 6.2. Odonates and riparian vegetation datasheet.

Anchialine Pools Animals – Shrimp and Fish

Park: _____ Pool: _____ Date: _____

Observers: _____

Quadrats (Record all shrimp and fish observed. Wait 1 min, observe 3 min.) Start Time: _____ End Time: _____

Shrimp	1		2		3		4		5		6	
	U	G	U	G	U	G	U	G	U	G	U	G
<i>Halocaridina rubra</i>												
<i>Metabetaeus lohena</i>												
<i>Palaemon debilis</i>												
<i>Macrobrachium grandimanus</i>												
<i>Macrobrachium lar</i>												
Fish	M	F	U	M	F	U	M	F	U	M	F	U
<i>Gambusia affinis</i>												
<i>Poecilia reticulata</i>												
<i>Oreochromis mossambicus</i>												

Shrimp Traps (Record all shrimp and fish trapped. Leave in 15 min.) Start Time: _____ End Time: _____

Shrimp	1		2		3		4		5		6	
	U	G	U	G	U	G	U	G	U	G	U	G
<i>Halocaridina rubra</i>												
<i>Metabetaeus lohena</i>												
<i>Palaemon debilis</i>												
Fish (w/in shrimp trap)	M	F	U	M	F	U	M	F	U	M	F	U
<i>Gambusia affinis</i>												
<i>Poecilia reticulata</i>												

Fish Traps (Record all shrimp and fish trapped. Leave in 30 min.) Start Time: _____ End Time: _____

Fish	1			2			3			4			5			6		
	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U
<i>Gambusia affinis</i>																		
<i>Poecilia reticulata</i>																		
<i>Oreochromis mossambicus</i>																		
Shrimp (w/in fish trap)	U			G			U			G			U			G		
<i>Halocaridina rubra</i>																		
<i>Metabetaeus lohena</i>																		
<i>Palaemon debilis</i>																		

Figure SOP 6.3. Shrimp and fish data sampling datasheet.

Anchialine Pool Animals - Snails

Park: _____ Pool: _____ Date: _____

Observers: _____

Start Time: _____ End Time: _____ Transect #: _____ Transect Length (m): _____

Snails (w/in 0.25 m both sides)								
#	Species	Size (mm)	#	Species	Size (mm)	#	Species	Size (mm)
1			41			81		
2			42			82		
3			43			83		
4			44			84		
5			45			85		
6			46			86		
7			47			87		
8			48			88		
9			49			89		
10			50			90		
11			51			91		
12			52			92		
13			53			93		
14			54			94		
15			55			95		
16			56			96		
17			57			97		
18			58			98		
19			59			99		
20			60			100		
21			61			Measure up to 100 snails. Tally the rest here:		
22			62					
23			63					
24			64					
25			65					
26			66					
27			67					
28			68					
29			69					
30			70					
31			71					
32			72					
33			73					
34			74					
35			75					
36			76					
37			77			Total # Snails (measured + tallied):		
38			78					
39			79					
40			80					

Figure SOP 6.4. Snail data sampling datasheet.

Anchialine Pool Animals – Physical Characteristics

Park: _____ Pool: _____ Date: _____

Observers: _____

Start Time: _____ End Time: _____ Transect #: _____ Transect Length (m): _____

Densimeter: Read at edge of pool, facing out for each direction. North _____ East _____ South _____ West _____

Point-intercept transect every 25 cm (Report all measurements in centimeters.)									
#	Location	Pebble Size	Water Depth	Detritus Depth	#	Location	Pebble Size	Water Depth	Detritus Depth
1					47				
2					48				
3					49				
4					50				
5					51				
6					52				
7					53				
8					54				
9					55				
10					56				
11					57				
12					58				
13					59				
14					60				
15					61				
16					62				
17					63				
18					64				
19					65				
20					66				
21					67				
22					68				
23					69				
24					70				
25					71				
26					72				
27					73				
28					74				
29					75				
30					76				
31					77				
32					78				
33					79				
34					80				
35					81				
36					82				
37					83				
38					84				
39					85				
40					86				
41					87				
42					88				
43					89				
44					90				
45					91				
46					92				

Figure SOP 6.5. Physical characteristics datasheet.

Anchialine Pool Animals – Light Measurements

Park: _____ **Pool:** _____ **Date:** _____

Observers: _____

LiCor Filename: _____

Transect Number:		Transect Length (m):			
Transect Description/Habitat Notes:					
Estimated Cloud Cover (%):		Weather Notes:			
Record ID(s) (LiCor):	Description:	Location (m):	Time:	Value(s):	Habitat Code*:
	Full Sun				
	Start				
	25%				
	50%				
	75%				
	End				
	Full Sun				

Transect Number:		Transect Length (m):			
Transect Description/Habitat Notes:					
Estimated Cloud Cover (%):		Weather Notes:			
Record ID(s) (LiCor):	Description:	Location (m):	Time:	Value(s):	Habitat Code*:
	Full Sun				
	Start				
	25%				
	50%				
	75%				
	End				
	Full Sun				

Transect Number:		Transect Length (m):			
Transect Description/Habitat Notes:					
Estimated Cloud Cover (%):		Weather Notes:			
Record ID(s) (LiCor):	Description:	Location (m):	Time:	Value(s):	Habitat Code*:
	Full Sun				
	Start				
	25%				
	50%				
	75%				
	End				
	Full Sun				

* Habitat codes: Full Sun (FS), Shaded by Vegetation (Veg), Shaded by Rock (Rock)

Figure SOP 6.6. Pool light measurements datasheet.