

Dataset: Palau lakes: barcodes

<https://www.bco-dmo.org/dataset/768138>

Project: Do Parallel Patterns Arise from Parallel Processes? (PaPaPro)

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**Table 1:** Primers and thermocycle conditions used for PCR of macroinvertebrates by taxonomic group.

Taxonomic group	Thermocycle (Primer pair)
ascidians	1(i,d); 2 (i,j); 7 (c,d)
bryozoans	4 (g,h)
cnidarians	4 (g,h); 5 (a,b)
crustaceans	5 (a,b)
echinoderms	3 (e,f)
molluscs	4 (g,h); 5 (a,b)
polychaetes	4 (g,h); 5 (a,b)
poriferans	6 (c,d); 7 (c,d); 7 (g,d)

Primer	Sequence (5' to 3')	Reference	
a	LCO1490	GGTCAACAAATCATAAAGATATTGG	[1]
b	HCO2198	TAACTTCAGGGTGACCAAAAAATCA	[1]
c	dgLCO1490	GGTCAACAAATCATAAAGAYATYGG	[2]
d	COX1-R1	TGTTGRGGGAAAAARGTTAAATT	[3]
e	COIceF	ACTGCCACGCCCTAGTAATGATATTTTTATGGTNGATGCC	[4]
f	COIceR	TCGTGTGTCTACGTCCATTCCTACTGTRACATRTG	[4]
g	dgLCO1490	TITCIACIAAYCAYAARGAYATTGG	[5]
h	dgHCO2198	TAIACYTCIGGRTGICRAARAAYCA	[5]
i	Tun forward	TCGACTAATCATAAAGATATTA	[6]
j	Tun reverse2	AACTTGTATTTAAATTACGATC	[6]

Thermocycle Conditions	
1	95°C 3 min, [94°C 60 s, 52°C 60 s, 72°C 75 s] x 3, [94°C 60 s, 50°C 60 s, 72°C 75 s] x 3, [94°C 60 s, 48°C 60 s, 72°C 75 s] x 10, [94°C 60 s, 52°C 60 s, 72°C 75 s] x 19, 72°C 10 min, 4°C end
2	94°C 3 min, [94°C 30 s, 50°C 30 s, 72°C 50 s] x 35, 72°C 10 min, 4°C end
3	95°C 3 min, [94°C 45 s, 57°C 60 s, 72°C 60 s] x 35, 72°C 10 min, 4°C end
4	95°C 3 min, [94°C 60 s, 54°C 60 s, 72°C 60 s] x 2, [94°C 60 s, 52°C 60 s, 72°C 60 s] x 2, [94°C 60 s, 50°C 60 s, 72°C 60 s] x 2, [94°C 60 s, 48°C 60 s, 72°C 60 s] x 10, [94°C 60 s, 52°C 60 s, 72°C 60 s] x 19, 72°C 10 min, 4°C end
5	94°C 3 min, [94°C 45 s, 52°C 45 s, 72°C 60 s] x 2, [94°C 45 s, 50°C 45 s, 72°C 60 s] x 2, [94°C 45 s, 48°C 45 s, 72°C 60 s] x 2, [94°C 45 s, 46°C 45 s, 72°C 60 s] x 2, [94°C 45 s, 52°C 45 s, 72°C 60 s] x 27, 72°C 10 min, 4°C end
6	94°C 8 min, [94°C 45 s, 55°C 45 s, 72°C 75 s] x 35, 72°C 10 min, 4°C end
7	95°C 3 min, [94°C 60 s, 54°C 60 s, 72°C 75 s] x 2, [94°C 60 s, 52°C 60 s, 72°C 75 s] x 2, [94°C 60 s, 50°C 60 s, 72°C 75 s] x 2, [94°C 60 s, 48°C 60 s, 72°C 75 s] x 10, [94°C 60 s, 52°C 60 s, 72°C 75 s] x 19, 72°C 10 min, 4°C end
References	
1	Folmer O, Black M, Hoeh W, Lutz R, Vrijenhoek R (1994) DNA primers for amplification of mitochondrial cytochrome c oxidase subunit I from diverse metazoan invertebrates. <i>Mol Mar Biol and Biotech</i> 3:294–299.
2	Geller J, Meyer C, Parker M, Hawk H (2013) Redesign of PCR primers for mitochondrial cytochrome c oxidase subunit I for marine invertebrates and application in all-taxa biotic surveys. <i>Mol Ecol Resources</i> 13(5):851–861.
3	Hoareau TB, Boissin E (2010) Design of phylum-specific hybrid primers for DNA barcoding: addressing the need for efficient COI amplification in the Echinodermata. <i>Mol Ecol Resources</i> 10(6):960–967.
4	Meyer CP, Geller JB, Paulay G (2005) Fine scale endemism on coral reefs: archipelagic differentiation in turbinid gastropods. <i>Evolution</i> 59(1):113–125.
5	Rot C, Goldfarb I, Ilan M, Huchon D (2006) Putative cross-kingdom horizontal gene transfer in sponge (Porifera) mitochondria. <i>BMC Evol Biol</i> 6(1):71.
6	Stefaniak L, Lambert G, Gittenberger A, Zhang H, Lin S, Whitlatch RB (2009) Genetic conspecificity of the worldwide populations of <i>Didemnum vexillum</i> Kott, 2002. <i>Aquatic Invasions</i> 4(1):29–44.