

DIGITAL APPENDIX 1

Bibliographic review for species that prey on *Cryphiops caementarius* in the study area (see Fig. 1)

Rivers systems / abbreviations	Hydrographic zones	Bibliographic references
Peru		
Peruvian rivers * (Pe)	CRPP	Hartmann (1958); Hernández (1974); Viacava et al. (1978); Morales (2019)
Cañete River (Ca)	CRPP	Valle (2010)
Majes-Camaná River (M-C)	CRPP	Elías (1960)
Tambo River (Ta)	CRPP	Bocardo, Morales, & Yipita (2007); Apaza (2018); Concha (2018)
Chile		
Chilean rivers ** (Chi)	SRAZ-RMSZ	Busse & Schlatter (1965); Castro (1966); Bahamonde & Vila (1971); Morales & Meruane (2013a, 2013b)
Loa River (Lo)	SRAZ	Alfaro et al. (1980); López, Segovia, & Alfaro (1986); De los Ríos-Escalante et al. (2010)
El Culebrón estuary (Cu)	RMSZ	Norambuena (1977); Avilés et al. (2018)
Limarí River (Li)	RMSZ	Tello et al. (2007); this study
Illapel and Choapa rivers (I-C)	RMSZ	Cortés (1999); this study

\* = Pativilca, Pisco, Ocoña, Majes-Camaná and Tambo rivers.

\*\* = Lluta, Camarones, Loa, Copiapó, Huasco, Elqui, Limarí, Illapel, Choapa, La Ligua and Aconcagua rivers.

DIGITAL APPENDIX 2

Taxonomic composition of the predator's species of *Cryphiops caementarius*

Guild of predators / family / species	Zoogeographic origin		Trophic functional group	Phenotypic attribute	River zones
	Perú	Chile			
Macroinvertebrates					
Leeches					
Glossiphonidae					
<i>Helobdella</i> spp.	-	Native	Omnivore	Opportunistic	R
Prawns					
Palaemonidae					
<i>Cryphiops caementarius</i> (Molina, 1782) *	Native	Native	Omnivore	Opportunistic	E, P, R

Number species = 2					
Vertebrates					
Fish					
Cichlidae					
<i>Australoheros facetus</i> (Jenyns, 1842)	-	Exotic	Omnivore	Opportunistic	E, P
Cyprinidae					
<i>Cyprinus carpio</i> (Linnaeus, 1758)	Exotic	Exotic	Omnivore	Opportunistic	E, P, R
Poeciliidae					
<i>Gambusia affinis</i> (Baird & Girard, 1853)	Exotic	Exotic	Omnivore	Opportunistic	E, P
Salmonidae					
<i>Oncorhynchus mykiss</i> (Walbaum, 1792)	Exotic	Exotic	Carnivore	Opportunistic	E, P, R
<i>Salmo trutta</i> (Linnaeus, 1758)	Exotic	Exotic	Carnivore	Opportunistic	E, P, R
Atherinidae					
Silversides	Native	Native	Omnivore	Opportunistic	E, P, R
Frogs					
Calyptocephalellidae					
<i>Calyptocephalella gayi</i> (Duméril & Bibron, 1841)	-	Native	Carnivore	Opportunistic	E, P, R
Pipidae					
<i>Xenopus laevis</i> (Daudin, 1802)	-	Exotic	Carnivore	Opportunistic	E, P, R
Waterfowls					
Ardeidae					
<i>Ardea alba</i> (Linnaeus, 1758)	Native	Native	Carnivore	Opportunistic	E, P, R
<i>Ardea cocoi</i> (Linnaeus, 1766)	Native	Native	Carnivore	Opportunistic	E, P, R
<i>Egretta thula</i> (Molina, 1782)	Native	Native	Carnivore	Opportunistic	E, P, R
<i>Nycticorax nycticorax</i> (Linnaeus, 1758)	Native	Native	Carnivore	Opportunistic	E, P, R

Laridae					
<i>Larus dominicanus</i> (Lichtenstein, 1823)	Native	Native	Carnivore	Opportunistic	E, P, R
<i>Leucophaeus modestus</i> (Tschudi, 1843)	Native	Native	Carnivore	Opportunistic	E, P, R
Phalacrocoracidae					
<i>Phalacrocorax brasilianus</i> (Gmelin, 1789)	Native	Native	Carnivore	Opportunistic	E, P
Phoenicopteridae					
<i>Phoenicopus chilensis</i> (Molina, 1782)	Native	Native	Omnivore	Selective	E
Anatidae					
<i>Anas cyanoptera</i> (Vieillot, 1816)	Native	Native	Herbivore	Opportunistic	E, P
Mammals					
Hominidae					
<i>Homo sapiens</i> (Linnaeus, 1758)	Cosmopolitan	Cosmopolitan	Omnivore	Selective	E, P, R
Mustelidae					
<i>Lontra felina</i> (Molina, 1782)	Native	Native	Carnivore	Selective	E
Number species = 19					
Total number species = 21					

\* = intraespecific predation / River zones = Estuary (E), Potamon (P), Rhithron (R).

### DIGITAL APPENDIX 3

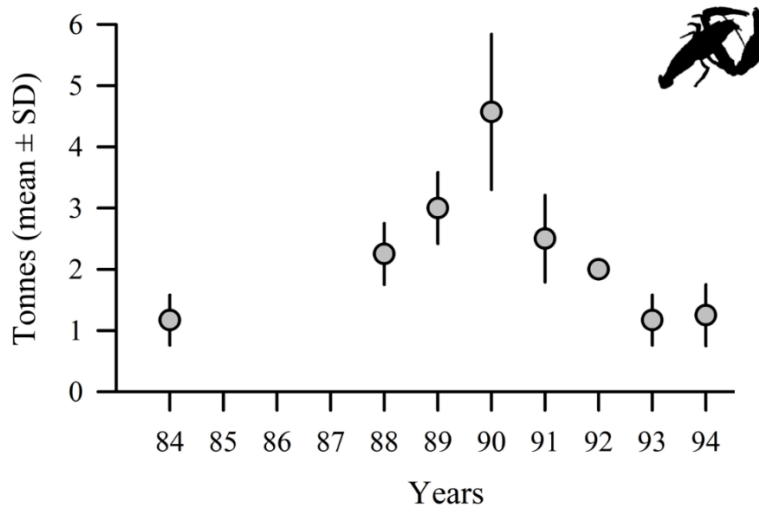
Taxonomic composition of the predator's species of *Cryphiops caementarius*

Species	OF	RF	Study area									
			CRPP				*	SRAZ	RMSZ			
			P e	C a	M- C	T a	Ch i	Lo	C u	L i	I- C	
<i>Helobdella</i> spp.	11.1	1.6									X	
<i>Cryphiops caementarius</i>	55.6	8.2	X				X	X	X			X
<i>Australoheros facetus</i>	11.1	1.6							X			

<i>Cyprinus carpio</i>	22.2	3.3					X					X
<i>Gambusia affinis</i>	44.4	6.6				X	X	X	X			
<i>Oncorhynchus mykiss</i>	44.4	6.6	X				X	X				X
<i>Salmo trutta</i>	11.1	1.6						X				
Silversides	22.2	3.3	X	X								
<i>Calyptocephalella gayi</i>	22.2	3.3					X					X
<i>Xenopus laevis</i>	11.1	1.6									X	
<i>Ardea alba</i>	66.7	9.8	X		X	X	X			X		X
<i>Ardea cocoi</i>	11.1	1.6										X
<i>Egretta thula</i>	55.6	8.2			X	X	X			X		X
<i>Nycticorax nycticorax</i>	55.6	8.2	X		X		X			X		X
<i>Larus dominicanus</i>	11.1	1.6			X							
<i>Leucophaeus modestus</i>	11.1	1.6	X									
<i>Phalacrocorax brasilianus</i>	44.4	6.6				X	X			X		X
<i>Phoenicopterus chilensis</i>	11.1	1.6	X									
<i>Anas cyanoptera</i>	33.3	4.9			X	X	X					
<i>Homo sapiens</i>	100.0	14.8	X	X	X	X	X	X	X	X	X	X
<i>Lontra felina</i>	22.2	3.3	X			X						
Total number species = 21			9	2	6	7	11	5	8	3	10	

For each species is indicated occurrence frequency (OF; %) and relative frequency (RF; %). Rivers names abbreviations in the column header are the same as in Table 1 and are grouped by hydrographic zone (see Fig. 1).

\* = includes two hydrographic zones (SRAZ-RMSZ).



**Digital Appendix 4.** Historical landing of *Cryphiops caementarius* in central-Northern Chile. Data correspond to official records of the National Service for Fisheries and Aquaculture (Sernapesca; <https://www.sernapesca.cl>) between 1984-1994. Since 1994, there is no official updating in landings data.