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Fish species involved in mass washed up eggs in Chinchorro beach, Arica - Chile during the period of one year

Especies de peces involucradas en varazones de masas de huevos en playa Chinchorro, Arica – Chile durante el periodo de un año

Felipe Méndez-Abarca[1], Camila F. Méndez[2], Ricardo A. Reyes[3], Héctor A .Vargas[4] & Giovanni A. Aragón[5].

[1]Departamento de Biología, Facultad de Ciencias, Universidad de Tarapacá, Casilla 6-D, Arica, Chile. E-mail: acuariumecozoo@hotmail.com. [2]Departamento de Medicina Veterinaria, Facultad de Medicina Veterinaria, Universidad Santo Tomás, Casilla 7-D, Talca, Chile. E-mail: camfevet@gmail.com. [3]Departamento de Idioma Extranjero, Facultad de Idiomas, Universidad de Tarapacá, Casilla 6-D, Arica, Chile. E-mail: rricardoreyes01@gmail.com. [4]Departamento de Recursos Ambientales, Facultad de Ciencias Agronómicas, Universidad de Tarapacá, Casilla 6-D, Arica, Chile. E-mail: havargas@uta.cl. [5]Departamento de Biología Facultad de Ciencias, Universidad Jorge Basadre G. Casilla 052, Tacna, Perú. E-mail: gioralva@gmail.com.

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ABSTRACT

It is established that the mass of eggs of some fish species are left on the sand of Chinchorro beach due to the sea tide. Chinchorro beach is located in Arica, Chile. This happens in a year –time period but the origin it is not clear. The species found after the larvae hatch in captivity, corresponding to marine pejerrey (*Odonthestes regia*) and the northern coastal stingray (*Sympterygia brevicaudata*). Because studies are needed to go deeper on the subject, in this way making sure the sustainability of the species involved in the aforementioned phenomenon.

Key words: Run aground, stranded eggs washed up, Chinchorro beach, *Odonthestes regia, Sympterygia brevicaudata*

RESUMEN

Se da a conocer las especies de peces cuyas masas de huevos varan en playa Chinchorro, Arica, Chile, ocurridas durante un periodo de un año y cuyo origen es aún poco claro. Las especies encontradas, tras la eclosión de las larvas en cautiverio, corresponden al pejerrey marino (*Odonthestes regia*) y a la raya costera del norte (*Sympterygia brevicaudata*). Debido a esto se hacen necesarios estudios más profundos sobre el tema, para que de esta forma se asegurare la sustentabilidad de las especies involucradas en el antes mencionado fenómeno.

Palabras clave: Varazones, ovas, Playa Chinchorro, *Odonthestes regia, Sympterygia brevicaudata*

INTRODUCTION

Due to washed up mass of fish eggs in Chinchorro beach area, Arica-Chile, it is necessary to know the species to which these eggs belong to propose and implement conservation and resource protection.

We collected egg masses of fish, recently stranded on the shores of Chinchorro beach area, with a frequency of two days per month during the period of one year (from March 2011 to March 2012). Egg masses were selected according to size and shape, spherical eggs having been found an average size approximate to 0.6 mm. These formed masses ranging from a few centimeters to some that exceeded two meters long and ovigerous capsules to an average size 36.2 mm. barrel-shaped, with horns on the anterior and posterior, the characteristic brown color, translucent backlit, whose appearance is similar to that described by Concha *y* col., 2009, for the species *Psammobatis scobina* (Philippi, 1857) (Rajiformes, Rajidae). The shape and size segregation prevented the explosion occurred after predation among larvae of different species.

Then separate the eggs and were placed in glass aquaria containing sea water drawn from the same area where collections were made, keeping in physical-chemical conditions similar to those of sea water in that area. Air was provided by an external pump with membrane filtration with a filter made smooth inner corner and change biweekly 20% of the total water of the aquarium, the temperature was tested four times a day, complementing all with the stabilization of the air conditioning the laboratory.

Two species were characterized, Marine pejerrey (*Odonthestes regia*) (Humboldt, 1833), his recognition was based on meristic and morphological features proposed by Chirichigno (1974) and (Medina y col., 2004, this species corresponds to a highly important resource for artisanal fisheries, there is a wealth of information about the biology of silverside, so research is needed on reproductive aspects that allow for conservation management of this species Gómez y col., 2006. Egg masses were collected Silverside from the month of July to December, which coincides with the data published by Mejia y col., 1970, who indicate that the reproductive period Silverside months ranging from July to November and more intense between August and October. Coayla y col., 1991 argue that the peak spawning of this species is given in the months of May and August, not this statement coinciding with the results of this work, because no egg masses were found during May and June.

The other species characterized, the northern coastal stingray (*Sympterygia brevicaudata*) (Cope, 1877) (Rajiformes, Rajidae), described by morphological characteristics indicated by Lamilla y Bustamante,, 2005 & Lamilla y Saez,, 2003. Ovigerous capsules for this species were collected in small quantities, to an average of 12 capsules per day of collection, from the month of April to October.

In southern Peru, i.e., between Arequipa, Moquegua and Tacna, these fish eggs stranded occur mainly in the "moves" or

"tidal waves" spring - summer, and extraordinarily large proportion.
Confirming the experience Chinchorro beach, ovigerous masses also correspond to smelt, correlated the characterization of the eggs and the presence of schools of this species in areas close to strandings. In the Arequipa region, we observed a striking correlation with the position of pejerrey in kelp forests of *Lessonia trabeculata* (Villouta & Santelices, 1986) especially brown, this experience is seen Biologist, personal communication Martin Zambrano. This is evident from what was reported at that time, the existence of a direct relationship between the gonadosomatic index and condition factor (environmental), Treviño (1999).

Possible causes of the mass stranded eggs of these species are not yet certain. Further investigations are urgently needed for sustainability.

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