

Environmental education & awareness, fundamental tool in the conservation of the Iberian crab

Núria Valls & Oriol Comas

Association of Defense and Study of Native Fauna &
Flora (ADEFFA)

ADEFFA association

- Non-profit association. It has a collaboration agreement with the Department of Agriculture, Livestock, Fisheries, Nutrition and Environment of the Generalitat de Catalunya (DAAM) for the fauna management and conservation.



Conservation of native crayfish in the Llobregat river basin

- ADEFFA collaborates with the conservation program of native crayfish, being held by the DAAM, managing the Llobregat river basin since 2005.



Conservation of native crayfish in the Llobregat river basin

- **Tracking populations**

Currently tracking 36 different populations of native crayfish.



Conservation of native crayfish in the Llobregat river basin

- **Captive breeding**

Small breeding farm with reproductive individuals of the Llobregat basin. Productivity: 200-250 second year crabs.



Conservation of native crayfish in the Llobregat river basin

- **Restocking**

Restocking in appropriate areas. Preliminary feasibility studies since 2010. Tracking.



Conservation of native crayfish in the Llobregat river basin

- Restocking



Conservation of native crayfish in the Llobregat river basin

- **Study of crayfish plague outbreaks**

Outbreak tracking, extraction and shipment of samples.



Conservation of native crayfish in the Llobregat river basin

- **Rescue and ex situ maintenance**

In outbreak cases, healthy individuals have been rescued for subsequent introduction.



Conservation of native crayfish in the Llobregat river basin

- **Territory Custody Contracts for habitat conservation.**



Conservation of native crayfish in the Llobregat river basin

- **Removing invasive species**

In closer areas of native crayfish populations



Environmental education in the conservation of native crayfish

- Fundamental to spread the knowledge about the problem. Education is fundamental to any conservation project.

Educate to preserve



Environmental education in the conservation of native crayfish

- General public has little knowledge of the problem that invader species cause to native crayfish.



Environmental education in the conservation of native crayfish

- Basic and simple concepts:



- Do not move animals from one place to another.
- Native crayfish takes good care of the river, invaders destroy it.
- Human generated problem

Environmental education in the conservation of native crayfish

- Very important not to disclose the areas where native crayfish populations operate.



Environmental education in the conservation of native crayfish

- Reach all agents involved, at all ages, although it seems hard.



Environmental education in the conservation of native crayfish

- Video showing of eggs and young trouts predation, were used for fishermen awareness.



Environmental education in the conservation of native crayfish

Environmental education at Camadoca wildlife conservation center, for schools and general public.



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Environmental education in the conservation of native crayfish

Environmental education at school.



Environmental education in the conservation of native crayfish: Invasive Crab Capture Day at Merlès River.



Environmental education in the conservation of native crayfish: Invasive Crab Capture Day at Merlès River.

IV JORNADAS DE CAPTURA DE CANGREJO DE RÍO INVASORES EN LA RIERA DE MERLÈS 2014



26 DE JULIO
(preinscripción antes del 18 de julio)

23 DE AGOSTO
(preinscripción antes del 15 de agosto)

a.adeffa@gmail.com

616940489

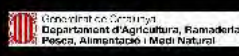
Organizado por:



Con la colaboración de:



Con la autorización de:



Dibujos: Clara Comas i Joan Comas

Diseño: Júlia Roma, Clara Comas i Núria Valls

PROGRAMA DE LAS JORNADAS



Entre las 18 y 19 h llegada al Centro Camadoca de Santa Maria de Merlès e inscripciones



19 h: Explicación de la jornada, visita a las instalaciones de peces y cangrejos del Centro Camadoca
Merienda - cena



21 h: inicio de la jornada de captura de cangrejo invasor en la Riera de Merlès

La actividad es gratuita y abierta a todas las edades



Para la preinscripción es necesario facilitar el nombre, DNI, población, edad de los niños, teléfono, correo electrónico y qué día queréis venir

Se admitirá un máximo de 180 participantes por jornada

Los socios de ADEFFA tienen prioridad a la hora de participar

Se enviará más información a las personas inscritas, antes de cada jornada

El cangrejo de río autóctono hace unos años, era abundante en muchos ríos de Cataluña, está adaptado a este medio. Pero el hombre introdujo primero el cangrejo de río rojo y después el cangrejo señal, ambos estadounidenses. Son dos especies portadoras de una enfermedad, la afanomicosis, que causa la muerte de todos los cangrejos autóctonos que se contagian

Además, las dos especies de cangrejo introducidas son invasoras: tienen muchas crías al año y provocan la destrucción del hábitat donde viven, depredan también los peces, sus crías y sus huevos y plantas

Es importante que las personas conozcamos el problema, para no seguir introduciendo las especies de cangrejo invasoras por los ríos y preservar los ecosistemas fluviales



CANGREJO DE RÍO AUTÓCTONO
(*Austropotamobius pallipes*)



CANGREJO ROJO AMERICANO
(*Procambarus clarkii*)



CANGREJO SEÑAL AMERICANO
(*Pacifastacus leniusculus*)

Invasive Crab Capture Day at Merlès River.

ENVIRONMENTAL AWARENESS PURPOSE FACING THE PROBLEM OF THE INTRODUCTION OF INVASIVE CRAB SPECIES



Invasive Crab Capture Day at Merlès River

ENVIRONMENTAL VOLUNTEERS



Invasive Crab Capture Day at Merlès River: RECEPTION OF PARTICIPANTS



Invasive Crab Capture Day at Merlès River: MATERIAL DISINFECTION



Invasive Crab Capture Day at Merlès River: CHILDREN ACTIVITIES, T-SHIRT SELLING AND MEMBERSHIP RECRUITMENT



Invasive Crab Capture Day at Merlès River: BRIEFING



Invasive Crab Capture Day at Merlès River: LIBERATION OF A RECOVERED IN WILDLIFE CENTER ANIMAL (GENERALITAT DE CATALUNYA)



Invasive Crab Capture Day at Merlès River: PARTIAL VISIT OF CAMADOCA CENTER AND VIDEO DISPLAY ON INTRODUCTION OF INVASIVE SPECIES PROBLEM

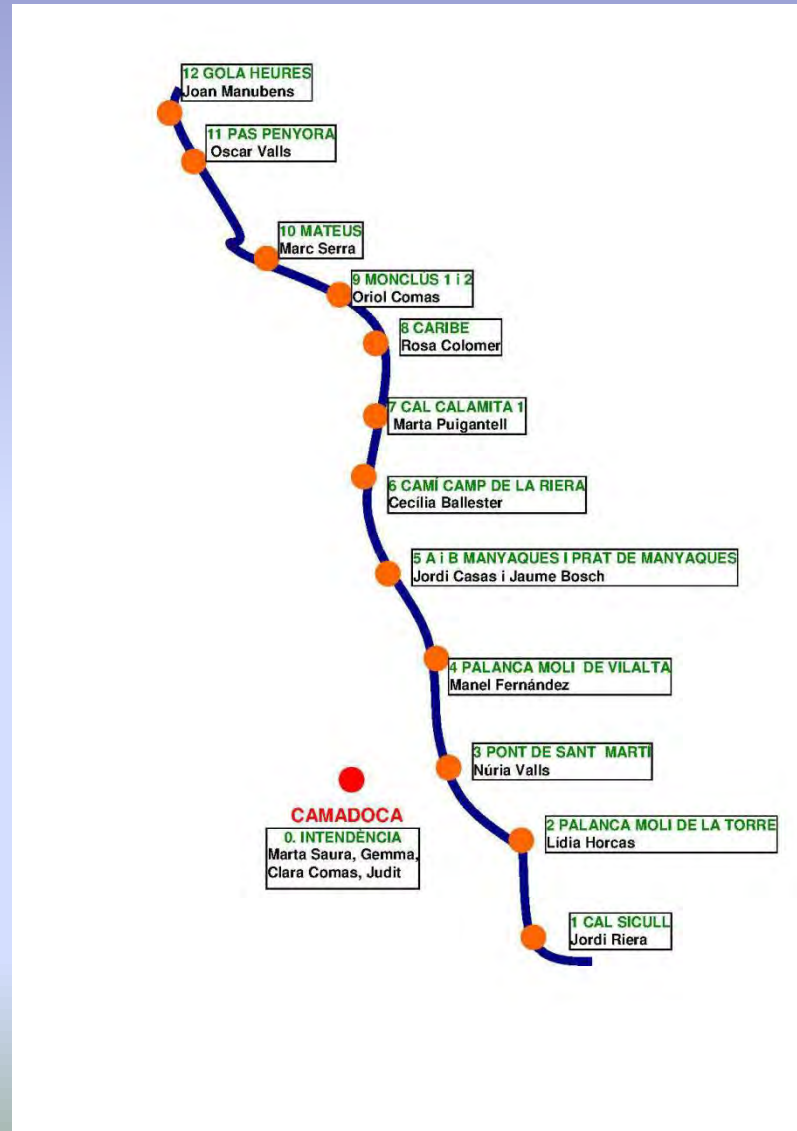


Invasive Crab Capture Day at Merlès River: DINNER



Invasive Crab Capture Day at Merlès River:

INVADER CRAYFISH CAPTURE ALONG THE RIVER



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Invasive Crab Capture Day at Merlès River:

INVADER CRAYFISH CAPTURE ALONG THE RIVER



Invasive Crab Capture Day at Merlès River:

INVADER CRAYFISH COUNT AT CAMADOCA CENTER



Invasive Crab Capture Day at Merlès River:

INVADER CRAYFISH COUNT AT CAMADOCA CENTER



Invasive Crab Capture Day at Merlès River:

INVADER CRAYFISH COUNT AT CAMADOCA CENTER



Invasive Crab Capture Day at Merlès River:

INVADER CRAYFISH COUNT AT CAMADOCA CENTER



Invasive Crab Capture Day at Merlès River:

RESULTS

RESULTADOS DE LA JORNADA DE CAPTURA DE CANGREJO INVASOR EN LA RIERA DE MERLÈS. 30 DE AGOSTO DE 2014

Resultats per grups i número total de crancs

Nº GRUPOS Y LUGAR	Nº TOTAL CANGREJOS POR GRUPO
GRUP 1: CAL SICULL	113
GRUP 2: PALANCA MOLÍ DEL MAS	121
GRUP 3: PALANCA MOLÍ DE VILALTA	190
GRUP 4: MANYAQUES	50
GRUP 5: CAMÍ DE CAMP RIERA	44
GRUP 6: CAL CALAMITA 2	34
GRUP 7: EL CARIBE	70
GRUP 8: MONCLÚS	94
GRUP 9: MATEUS	141
GRUP 10: PAS DE LA PENYORA	44
GRUP 11: LA GOLA DE LES HEURES	64
TOTAL	965 CANGREJOS

Participaron **194 personas**, de las cuales **71** eran **niños**

Se capturaron un total de **965** cangrejos, **799** cangrejos **señal** y **166** cangrejos **rojos**

Invasive Crab Capture Day at Merlès River:

RESULTS

Resultados por grupos, especies y sexos

Nº GRUPO Y LUGAR	CANGREJO SEÑAL			CANGREJO ROJO			Nº TOTAL CANGREJOS POR GRUPO
	MACHO	HEMBRA	TOTAL SEÑAL	MACHO	HEMBRA	TOTAL ROJO	
GRUP 1: CAL SICULL	12	25	37	34	42	76	113
GRUP 2: PALANCA MOLÍ DEL MAS	12	19	31	49	41	90	121
GRUP 3: PALANCA MOLÍ DE VILALTA	76	114	190				190
GRUP 4: MANYAQUES	17	33	50				50
GRUP 5: CAMÍ DE CAMP RIERA	17	27	44				44
GRUP 6: CAL CALAMITA 2	9	25	34				34
GRUP 7: EL CARIBE	19	51	70				70
GRUP 8: MONCLÚS	30	64	94				94
GRUP 9: MATEUS	51	90	141				141
GRUP 10: PAS DE LA PENYORA	14	30	44				44
GRUP 11: LA GOLA DE LES HEURES	32	32	64				64
TOTAL	289 SEÑAL MACHOS	510 SEÑAL HEMBRAS	799 SEÑAL	83 ROJOS MACHOS	83 ROJOS HEMBRAS	166 ROJOS	965 CANGREJOS

Resultados por tamaño, especies y sexos

TAMAÑO MEDIO DE LOS CANGREJOS			
CANGREJO SEÑAL	6,8	MACHO	7
		HEMBRA	6,9
CANGREJO ROJO	8,5	MACHO	8,7
		HEMBRA	8,3

EL CANGREJO MÁS GRANDE			
CANGREJO SEÑAL	13	MACHO	13
		HEMBRA	12,5
CANGREJO ROJO	12	MACHO	11,5
		HEMBRA	12

EL CANGREJO MÁS PEQUEÑO			
CANGREJO SEÑAL	2	MACHO	2
		HEMBRA	2
CANGREJO ROJO	2	MACHO	3
		HEMBRA	2

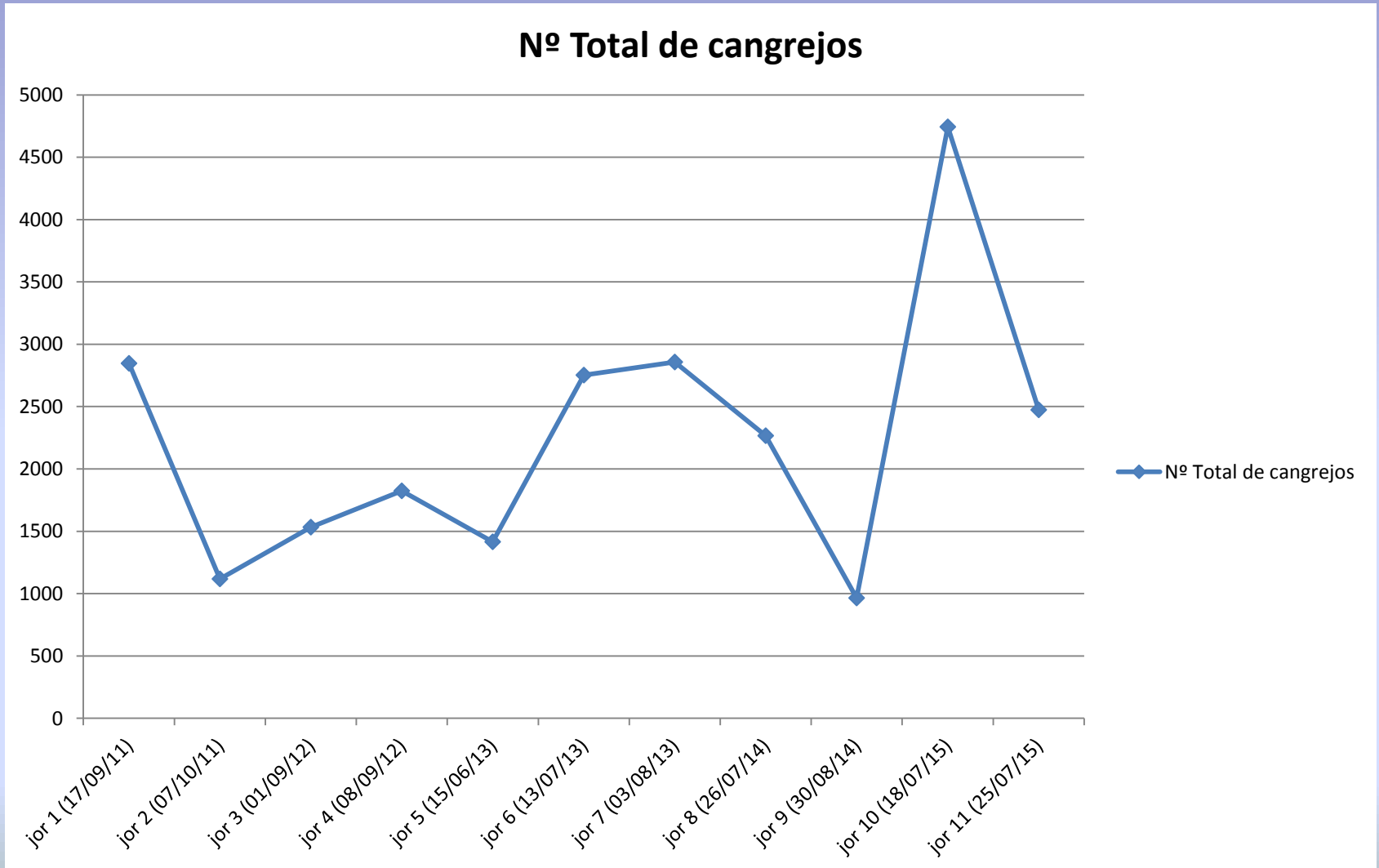
* La lluvia provocó que el agua fuese mas turbia, condicionando que se capturen menos cangrejos de tamaño pequeño, porque no los veían. Es necesario agradecer a todos los voluntarios el sobreesfuerzo que supuso la captura dadas las malas condiciones climatológicas

Invasive Crab Capture Day at Merlès River:

RESULTS

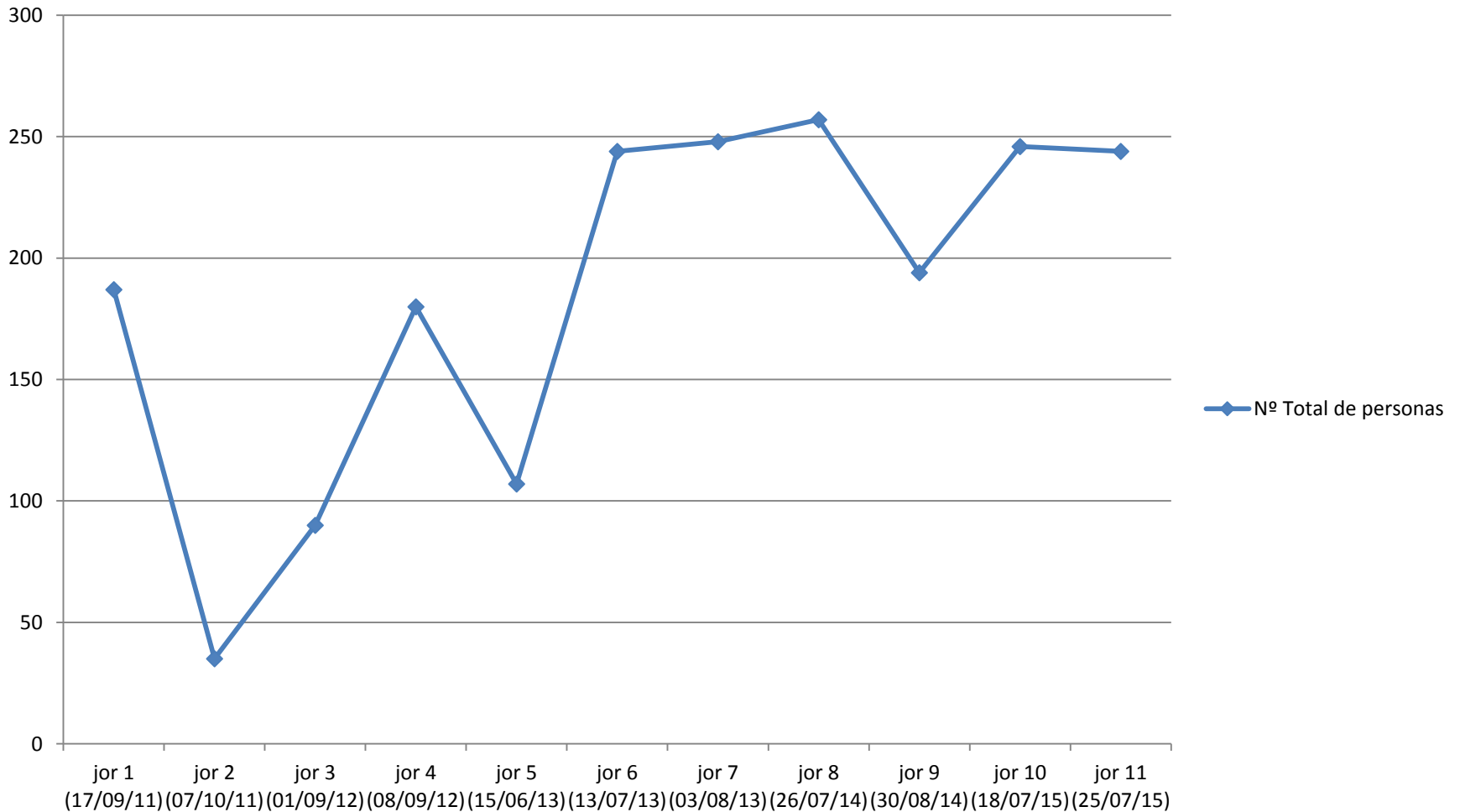
AÑO	2011		2012		2013			2014		2015		TOTAL
FECHA	17/09/11	07/10/11	01/09/12	08/09/12	15/06/13	13/07/13	03/08/13	26/07/14	30/08/14	18/07/15	25/07/15	
Nº Total de cangreos	2846	1118	1532	1824	1416	2753	2857	2266	965	4743	2473	24793
Nº Total de personas	187	35	90	180	107	244	248	257	194	246	244	2032
Nº cangrejos / persona	15,2	31,9	17,0	10,1	13,2	11,3	11,5	8,8	5,0	19,3	10,1	12,2

Invasive Crab Capture Day at Merlès River: RESULTS



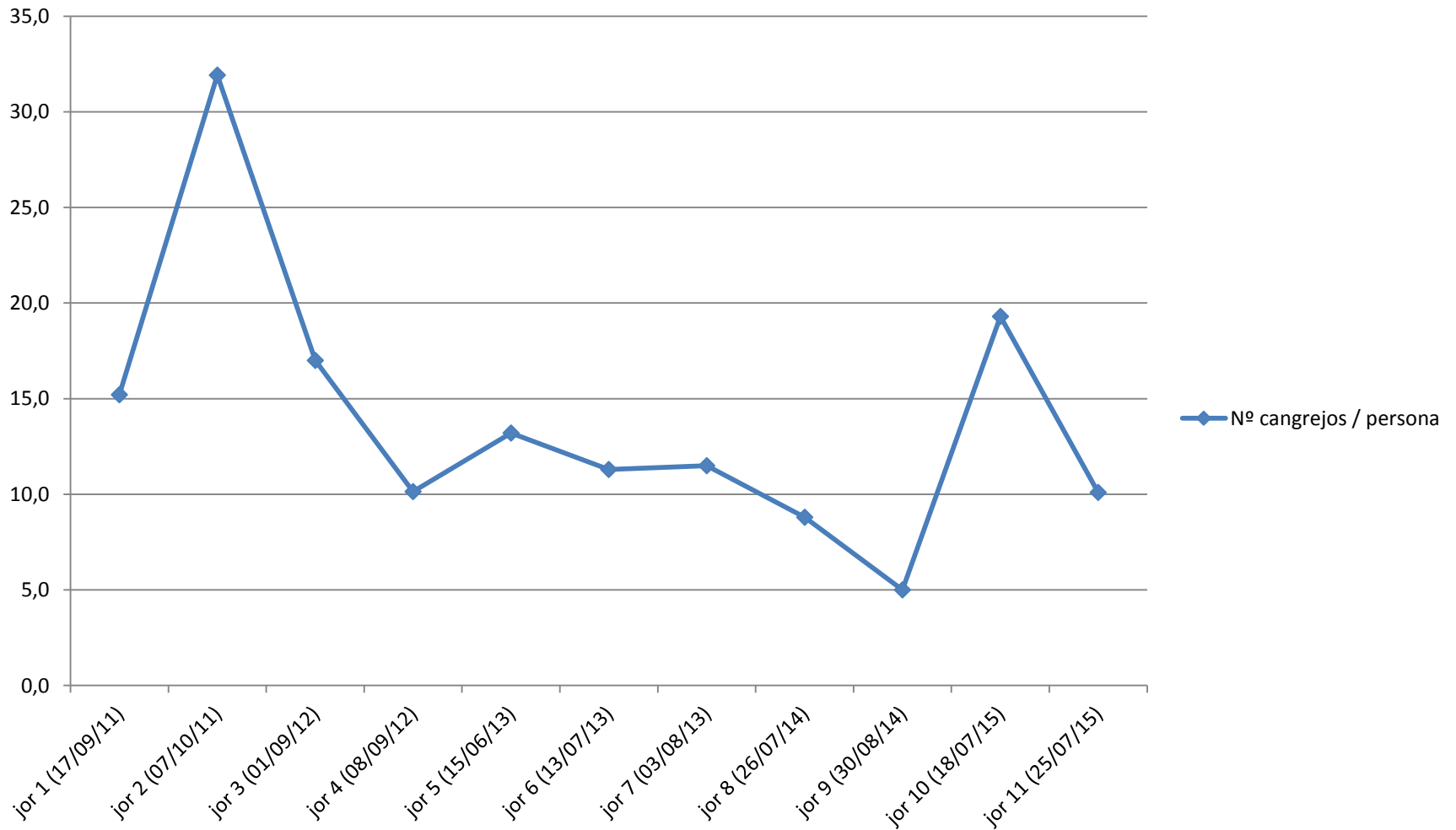
Invasive Crab Capture Day at Merlès River: RESULTS

Nº Total de personas



Invasive Crab Capture Day at Merlès River: RESULTS

Nº cangrejos / persona



Invasive Crab Capture Day at Merlès River:

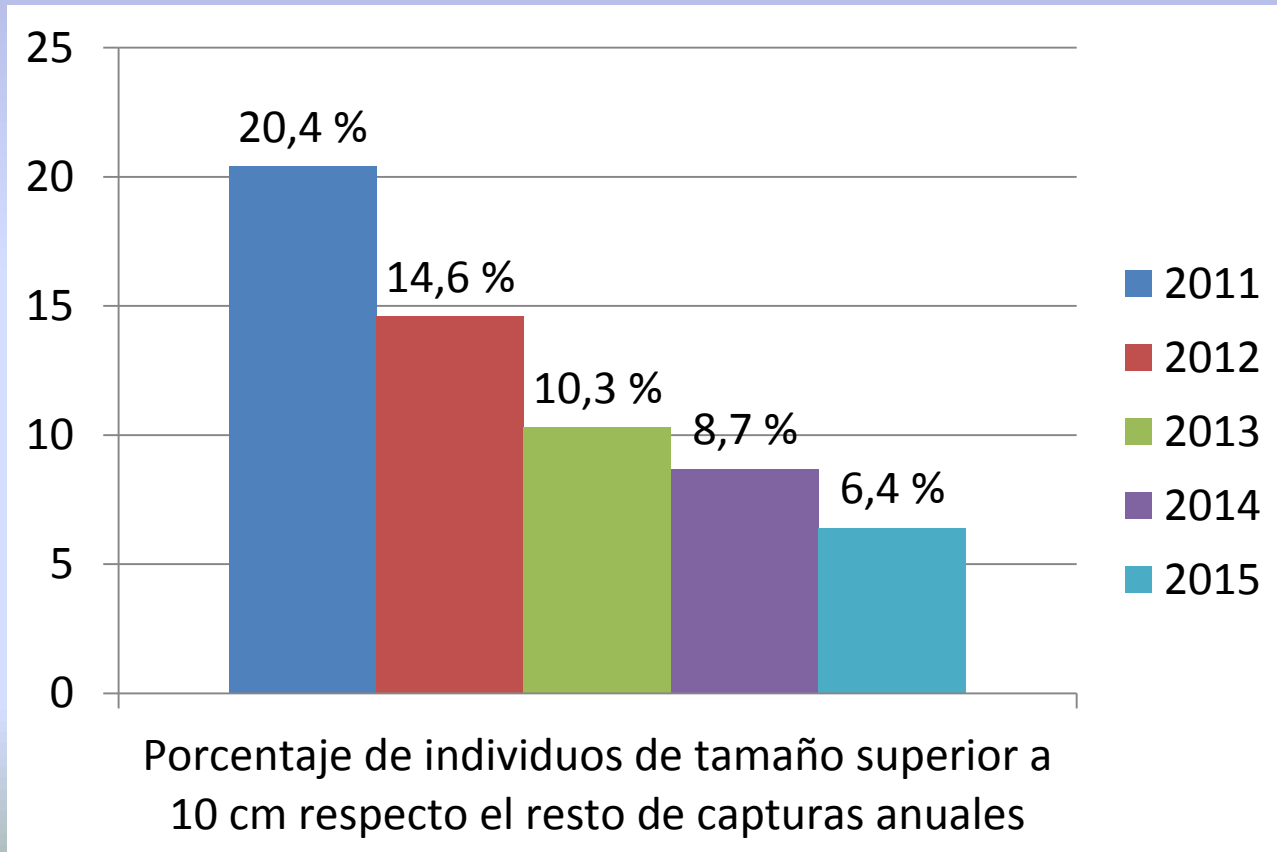
RESULTS

- The awareness of participants is high. Moreover, diffusion at workplace and social life is achieved.
- Spread the topic in the media

Invasive Crab Capture Day at Merlès River:

RESULTS

ADEFFA performed twice as many catches, trapping 50-000 crabs in 5 years. Percentage of larger size signal crab (10 cm) decreases every year.



Invasive Crab Capture Day at Merlès River:

RESULTS

Signal crayfish and other invasive species at Merlès river prey naiad populations and should be rapidly decreased the amount of larger crabs.





Thanks to

