

# THE ROYAL SOCIETY PUBLISHING



<https://royalsociety.org/about-us/history/>

Guía de uso 2015

# Contenidos

Nombre del Journal	Cobertura Temática
Proceedings A	Matemáticas, Física e Ingeniería
Proceedings B	Ciencias Biológicas
Philosophical Transactions A	Matemáticas, Física e Ingeniería
Philosophical Transactions B	Ciencias Biológicas
Biology Letters	Ciencias Biológicas
Interface	Multidisciplinaria, Ciencias Biológicas y Físicas
Notes and Records: the Royal Society Journal of History of Sciences	Historia de la Ciencia e Historia Biográfica
Interface Focus	Multidisciplinaria, Ciencias Biológicas y Físicas
Open Biology (open access)	Biología Celular y Molecular
Royal Society Open Science (open acces)	Multidisciplinaria, Ciencias, Ingeniería y Matemáticas

# Página principal de The Royal Society Publishing – Journals <http://royalsocietypublishing.org/journals>

The screenshot shows the homepage of The Royal Society Publishing Journals. The layout includes a top navigation bar with links like 'About us', 'Blog', 'Help', 'Contact us', 'Feedback', and 'Sitemap'. Below this is the main header with 'THE ROYAL SOCIETY PUBLISHING' and a '350 YEARS OF SCIENTIFIC PUBLISHING' banner. A secondary navigation bar contains 'Journals', 'Authors', 'Librarians', and 'Other titles News'. A large central banner features a space-themed image and the text 'Publishing 350 From foundation to future'. To the right is a search box labeled 'Search Our Journals' with a 'Search' button and a 'More' button below. Below the main banner are six journal tiles, each with a cover image, title, and a brief description. The tiles are: Philosophical Transactions B, Proceedings B, Biology Letters, Open Biology, Philosophical Transactions A, and Proceedings A. Each tile includes links for 'Journal home', 'For authors', and 'For librarians'.

Ir a:

1. Sobre el editor, Blog de RS, Ayuda sobre el sitio de RSP (Características, búsquedas y otros), Contacto, Enviar comentarios, Mapa del sitio.
2. Pestañas de: Journals, Información para autores, Información para bibliotecarios, otros títulos y noticias.
3. Journals
4. Link a página de la Royal Society
5. Tipos de búsqueda: Simple y Avanzada
6. Link al Journal Royal Society Open Science
7. Ir a páginas de cada Journals

# Página principal de un Journal

## INTERFACE



1 search  Advanced

- 2 Home Content Information for About us Sign up Submit

### 3 Table of Contents

06 March 2015; volume 12, issue 104

New articles in their final version of record are published here as soon as they are ready. The latest ones are added to the top of the relevant section.

#### REVIEW ARTICLES

- 1. **Inflammation in intervertebral disc degeneration and regeneration**  
Maria Molinos, Catarina R. Almeida, Joana Caldeira, Carla Cunha, Raquel M. Gonçalves, Mário A. Barbosa  
J. R. Soc. Interface 2015 12 201411191; DOI: 10.1098/rsif.2014.1191. Published 11 February 2015
- 2. **Creating the brain and interacting with the brain: an integrated approach to understanding the brain**  
Jun Morimoto, Mitsuo Kawato  
J. R. Soc. Interface 2015 12 20141250; DOI: 10.1098/rsif.2014.1250. Published 14 January 2015
- 3. **Investigating cell mechanics with atomic force microscopy**  
Kristina Haase, Andrew E. Pelling  
J. R. Soc. Interface 2015 12 20140970; DOI: 10.1098/rsif.2014.0970. Published 14 January 2015

#### RESEARCH ARTICLES

1. Búsqueda en este journal.
2. Pestañas de: Contenido, Información del journal, Sobre el consejo editorial, Suscripción, Enviar por correo.
3. Tabla de contenido.
4. Número del Journal.
5. Buscar en este número.
6. Navegar por diferentes secciones de este journal.
7. Búsqueda por temas.
8. Ir a más leídos y más citados.
9. Buscar artículos similares en otros journals.

4 This issue

Table of Contents  
About the Cover  
Index by author  
Ed Board (PDF)

5 Search this issue

- 6 JUMP TO
- Review articles
  - Research articles
  - Reports

See other Royal Society journals

7 BROWSE BY SUBJECT

astrobiology	astrochemistry
atmospheric chemistry	biochemistry
biocomplexity	bioenergetics
bioengineering	biogeochemistry
biogeography	bioinformatics
biomaterials	biomathematics
biomedical engineering	biometeorology
biometrics	biomimetics
biophysics	biotechnology

See all

8 MOST READ MOST CITED

- Tracking employment shocks using mobile phone data
- Hiding the squid: patterns in artificial cephalopod skin
- The mortality of companies
- Homological scaffolds of brain functional networks

More

9 INTERFACE FOCUS To read similar articles, check out our sister journal

# Página de resultados

**1** Journals Authors Librarians Other titles News

Royal Society Publishing is the publishing division of the Royal Society

**2** Search Results

Search Term  
biocomplexity  
Type a term to search within all articles in this journal: e.g. stem cell

**3** 190 Results for term "biocomplexity"

**4** Format Results

Number of results per page: 10  
Sort: Best Match, Oldest First, Newest First  
Format Results: Standard Format, Condensed Format

**5** Royal Society Homepage

**6** Search Our Journals

keywords Search  
Advanced »

Research Article  
J Baird Callicott, Ricardo Rozzi, Luz Delgado, Michael Monticino, Miguel Acevedo, Paul Harcombe  
Phil Trans R Soc B. 2007 362 1478 321; doi: 10.1098/rstb.2006.1989  
**Biocomplexity and conservation of biodiversity hotspots: three case studies from the Americas**  
Abstract Full Text Full Text(PDF)  
...Lindsey Gillson and Sandra Knapp **Biocomplexity** and conservation of biodiversity hotspots...UniversityHouston, TX The perspective of **biocomplexity** in the form of coupled natural and...service to conservation goals. Three **biocomplexity** case studies of areas notable for their...

1. Pestañas de navegación por: Journals, Autores, Bibliotecarios, Otros Títulos Noticias
2. Resultados de búsqueda, refinar por:
  - Cita
  - Autor(es). Palabra(s) clave.
  - Limitar resultados por: Fecha, Journal, Colección.
3. Número y lista resultados
4. Ordenar resultados:
  - 10, 25, 50, 75 y 100 artículos por página
  - Más relevante, Más antiguo, Más reciente.
  - Formato Estándar y condensado.
5. Ir a la página de la Royal Society
6. Hacer nuevas búsquedas

NOTA: En búsqueda avanzada se muestran los mismos criterios (No. 2)

# Artículo en HTML

1. Revisar estatus del artículo en CrossMark, para verificar correcciones, actualizaciones, fe de erratas y más.

2. Cita del artículo.

3. Navegar por:
  - Artículo HTML
  - Imágenes dentro del artículo.
  - Métrica: Cuantas veces ha sido descargado y compartido en redes sociales.
  - Cartas.

4. Resumen

5. Ver artículo en PDF

6. Numero donde está el artículo

7. Palabras clave.

8. Herramientas:

- Compartir en redes sociales, marcadores en la Web, gestores de noticia en ciencia y tecnología, entre otros,
- Enviar por correo electrónico.
- Imprimir.
- Administrar alertas (debe proporcionar un correo electrónico)
- Gestores de referencias.
- Descargar
- Permisos

The screenshot shows the article page on the journal website. At the top, there is a search bar and the journal name 'INTERFACE'. Below the navigation menu, there are several numbered callouts: 1. CrossMark logo; 2. Article title; 3. Article navigation tabs (Article, Figures & Data, Info & Metrics, eLetters); 4. Abstract text; 5. PDF icon; 6. Table of Contents sidebar; 7. Keywords section; 8. Share and citation tools.

**INTERFACE** 350 YEARS OF SCIENTIFIC PUBLISHING

Home Content Information for About us Sign up Submit

1 CrossMark click for updates

2 **Biomechanics and hydrodynamics of prey capture in the Chinese giant salamander reveal a high-performance jaw-powered suction feeding mechanism**

Egon Heiss, Nikolay Natchev, Michaela Gumpenberger, Anton Weissenbacher, Sam Van Wassenbergh  
Published 6 March 2013. DOI: 10.1098/rsif.2012.1028

3 Article Figures & Data Info & Metrics eLetters 5 PDF

4 **Abstract**

During the evolutionary transition from fish to tetrapods, a shift from uni- to bidirectional suction feeding systems followed a reduction in the gill apparatus. Such a shift can still be observed during metamorphosis of salamanders, although many adult salamanders retain their aquatic lifestyle and feed by high-performance suction. Unfortunately, little is known about the interplay between jaws and hyobranchial motions to generate bidirectional suction flows. Here, we study the cranial morphology, as well as kinematic and hydrodynamic aspects related to prey capture in the Chinese giant salamander (*Andrias davidianus*). Compared with fish and previously studied amphibians, *A. davidianus* uses an alternative suction mechanism that mainly relies on accelerating water by separating the 'plates' formed by the long and broad upper and lower jaw surfaces. Computational fluid dynamics simulations, based on three-dimensional morphology and kinematical data from high-speed videos, indicate that the viscerocranial elements mainly serve to accommodate the water that was given a sufficient anterior-to-posterior impulse beforehand by powerful jaw separation. We hypothesize that this modified way of generating suction is primitive for salamanders, and that this behaviour could have played an important role in the evolution of terrestrial life in vertebrates by releasing mechanical constraints on the hyobranchial system.

6 **1. Introduction**

A key component of aquatic prey capture in most vertebrates is an explosive expansion of the oropharyngeal cavity by a series of coordinated movements of head parts. Owing to the incompressibility of water, this expansion causes prey and surrounding water to be drawn into

7 **KEYWORDS**

*Andrias davidianus*, suction feeding, computed tomography, high-speed video, computational fluid dynamics, Urodela

8 Share Email Print Manage alerts Citation tools Download Article reuse

# Artículo en HTML – Continuación

the open mouth [1], a behaviour referred to as suction feeding. The widespread use of suction feeding among aquatic vertebrates proves that it is a very effective way to capture a wide range of prey [2–10]. Most suction feeding fish species use a fast motion of the hyoid and abduction of the gill cover as the main contributor to suction generation by oropharyngeal expansion [1–3,11]. Such an expansion causes the prey and surrounding water to accelerate into the gaping mouth, and the engulfed water is then expelled through the gill slits [11]. Obviously, such

**1** Article

- Abstract
- 1. Introduction
- 2. Material and methods
- 3. Results
- 4. Discussion
- Acknowledgements
- References

Figures & Data

Info & Metrics

PDF

eLetters

**2** Related articles

No related articles found

**3** Web of Science Scopus PubMed Google Scholar

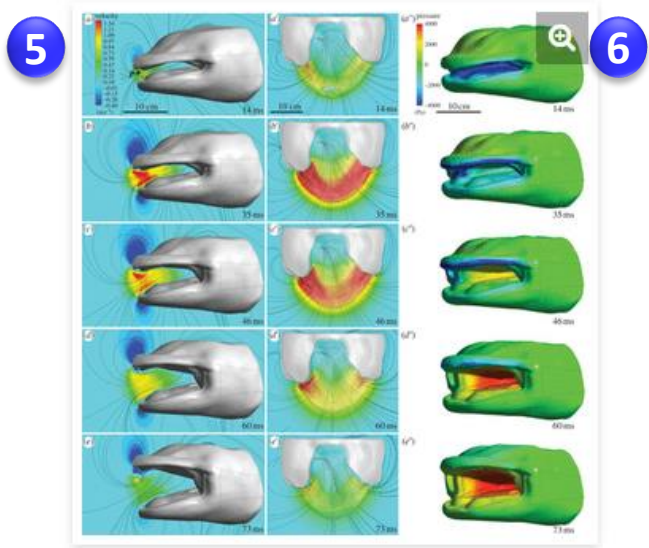
**3** Cited By

**4** **INTERFACE FOCUS** To read similar articles, check out our sister journal

1. Navegar por las diferentes secciones del artículo.
2. Artículos relacionados.
3. Citado por.
4. Ver artículos relacionados en otros journals.

suction feeding in salamanders, for example, have not been quantified yet. Nevertheless, the change from a unidirectional to a bidirectional feeding system is considered a key innovation behind the fish–tetrapod transition during terrestrial evolution of vertebrates.

Previous research suggested that the feeding system of one of the most primitive groups, the Cryptobranchidae or giant salamanders, is significantly distinct from other aquatic salamander groups [26]. This multi-variate comparative analysis of feeding kinematics and morphology placed *Cryptobranchus alleganiensis*, which is one of the three extant species of giant salamanders, separate from five more derived salamander groups. In *Cryptobranchus*, a considerable delay was observed in the onset of the depression of the hyoid [26], generally a



**7** Figure 6. **8** Download figure | Open in new tab | Download powerpoint

Flow patterns on the mid-sagittal (a–e) and corresponding midfrontal (a'–e') plane and pressures on the surfaces of the salamander (a''–e'') for a mouth opening sequence calculated by CFD. Anterior-to-posterior flow velocities are shown in (a–e) so that negative values mean a posterior-to-anterior flow. Point P indicates a central, fixed position between the jaw tips where flow velocities are monitored (figure 7a). Absolute flow velocities are shown in (a'–e'). Streamlines (black lines) illustrate the instantaneous flow directions. The salamander's surface in (a'–e') is made transparent to visualize intra-oral flow velocities. (a''–e'') Note the high negative pressure values on the internal oropharyngeal surface in the early mouth opening phase, which become positive 44 ± 8 ms after the start of mouth opening (defined as time = 0 ms).

5. Vista de una imagen.
6. Dar *click* en ícono de la lupa para ver más grande.
7. Número de imagen y descripción de la misma.
8. Descargar imagen en:
  - .jpg, sin descripción.
  - Abrir en nueva pestaña, sin descripción.
  - Descargar en PowerPoint con descripción y referencia correspondiente.

## Publishing 350

From foundation to future

Celebrating 350 years of  
scientific publishing at the  
Royal Society.

350 YEARS  
OF SCIENTIFIC  
PUBLISHING

Para mayores informes, por favor contáctenos:

[contact@itmsgroup.net](mailto:contact@itmsgroup.net)

T: +1 305 823 7766

F: +1 305 826 6195

[www.itmsgroup.net](http://www.itmsgroup.net)