# **SERGE PLANES**

CRIOBE - Perpignan

USR 3278 EPHE CNRS UPVD(CBETM)

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Méditerranéenne

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CRIOBE - Moorea

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Google Scholar

ResearchGate

# **DIRECTION**

- Director of USR 3278 CRIOBE CNRS-EPHE-UPVD (www.criobe.pf) 2007 2019
- Director LABEX « CORAIL » (PSL-EPHE-PIA- <u>www.labex-corail.fr</u>) 2010 present
- Director IRCP 'Pacific Coral Reef Institute' (EPHE) 2009 present
- Director of Observation Service SNO CORAIL (INSU) (www.criobe.pf/observatoire) 2007 present
- Coordinator of the Environment Centre of the l'IDEX Paris Sciences and Letters 2015 present
- Director of Science, Tara Pacific Expedition (www.taraexpeditions.org) 2015 present

## **AWARDS**

- Knight in the French National Order of Merit (2019)

## **EDUCATION**

- Capacity to Direct Research (HDR), University of Perpignan (September 1996)
   <u>Title:</u> Evolutionary importance of the pelagic larval phase of fish: influence on the genetic diversity of species and populations.
- Post-doctoral research fellow, Australian Institute of Marine Science (1992 1993, Townsville, Australia)
- **Doctoral Thesis**, Paris University VI. (March 1992)

  <u>Title</u>: Spatial dispersion scales of reef fish larvae in French Polynesia: influence on the geographical differentiation of populations.

### **EMPLOYMENT**

# Highlights

- Director of Research CNRS (DRHC) Section 29 (2019)
- Adjunct Professor at the Australian Institute of Marine Science (2019)
- Directeur d'Etudes Cumulant EPHE (SVT)
- Director of the LABEX « CORAIL » (PSL-EPHE-Programme d'Investissements d'avenir)

- Director of the IRCP 'Institut des Récifs Coralliens du Pacifique' (EPHE)
- Responsible for the Pôle Environnement de l'Université Paris Sciences et Lettres

### Detail

| 2019 - present | Director of Research, Hors Classe, CNRS (DRHC) – Section 29                         |  |  |
|----------------|---|--|--|
| 2019 – present | Adjunct Professor at the Australian Institute of Marine Science                     |  |  |
| 2010 – 2019    | Director of Research, First Class, CNRS (DR1) – Section 29                          |  |  |
| 2008 – present | Adjunct Professor at the Ecole Pratique des Hautes Etudes                           |  |  |
| 2004 - 2010    | Director of Research, CNRS (DR2)  |  |  |
| 1997 - 2004    | Research Officer, CNRS (CR1)  |  |  |
| 1999           | In 1999, 6-months spent at the laboratory of Professor Giacomo Bernardi (University |  |  |
|                | of California - Santa Cruz). Training in molecular biology techniques to then       |  |  |
|                | understand population genetics on genomic bases.                                    |  |  |
| 1993 - 1997    | Research Officer, CNRS (CR2)  |  |  |

# **SCIENTIFIC ADVISORY POSITIONS**

- Member elected to the Scientific Council of the EPHE 2018 in progress
- Member of the Scientific Council of the French Biodiversity Agency 2016 in progress
- French Expert at the Ministry of Ecological and Solidarity Transition and the Ministry of Foreign Affairs for the International Coral Reef Initiative (ICRI) 2007 in progress

# **PUBLIC - PRIVATE PARTNERSHIPS**

# **Business creation**

- Creation and partner in the company Marepolis (<u>www.marepolis.fr</u>) with 3 former PhD students (Anne Tessier, Rita Sahyoun, Bertrand Cazalet) of USR 3278 in 2015
- Partner in the creation of Blue Finance (<u>www.blue-finance.org</u>) with 1 former doctoral student (Nicolas Pascal) of USR 3278 in 2016

# **Public-Private Partnership**

- Elected member of the SAIC Supervisory Board of the EPHE - 2018 - ongoing

Scientific Dive Instructor Training (1991)

- Member of the Board of Directors "Fa'ahotu" business cluster in French Polynesia (2011-2018)

## **GENERAL**

| Research Focus           | Marine Ecology/ Coral Reefs / Dispersal / Connectivity / Population Genetics / Molecular Genetics                 |   |
|--------------------------|---|---|
| Teaching                 | Masters level: e-learning:  | Population Genetics / Phylogeography (10 h /yr) Development of an interactive teacher-training course at the EPHE |
| <b>Expert Committees</b> | 22 university thesis committees, 10 HDR (Accreditation to Supervise Research juries and 6 tenure committees (USA) |   |
| Boating and Diving       | Hyperbaric Cha  | mber Certification, Class II B (1996)   |

### **Boating License A**

## **Animal Experimentation**

Level 1 Training (Experimental Methods) (1994)
Authorization to conduct experiments on animals n° 006725 (1995)
(Fundamental Research: Examination and Sampling on Animals under anaesthesia)

# **SUMMARY**

Serge Planes has been involved in the study of the genetics of marine fish populations since the beginning of his career, which began with his PhD in 1989. Over the past 20 years, he has published more than 185 articles in international journals dealing with the genetics of coral reef fish populations but also, more generally, with ecology, ecology of marine protected areas and recruitment of marine fish. An analysis of research on coral reef ecosystems in the last decade (1995-2005), conducted by the Institute for Scientific Information of the Thomson Reuters Agency, ranks his work as #19 in the world, among more than 5060 authors (see <a href="http://esi-topics.com/coralreef">http://esi-topics.com/coralreef</a>). This international recognition has led to an invitation to join the Australian Centre of Excellence on Coral Reefs, which has only 2 non-Australian members. His early work suggested that connectivity in the marine environment and coral reefs is much more restricted in space than was generally accepted before the 1990s. Most recent work using genetic markers and other techniques has confirmed these early results by demonstrating that self-recruitment in marine populations is a major process to be taken into account in conservation policies. This work has led the international community to consider that marine systems are less dispersive, in contrast to what people believed until the 1990s. More recently, the first application of kinship analysis methods to the marine world has opened the way to new questions about the very evolution of dispersal in marine species.

Serge Planes was the director of CRIOBE for 12 years (2007-2018), a somewhat unique USR (3278), located on 2 sites (Perpignan and Moorea) and with 3 'tutelles', or French research organizations as guardians (EPHE, CNRS, UPVD). The Perpignan centre, based on the campus of the University of Perpignan is a traditional university-associated centre, while the CRIOBE centre in Moorea, French Polynesia, represents a real challenge as it constitutes a marine station, with a capacity to host 30 visitors. The Moorea centre welcomes around 150 researchers and students every year. It attracts people at both the national and international levels.

At the national level, Serge Planes heads the LabEx "CORAIL", which brings together all of France's scientists working on ecology and related issues on coral reefs. This project brings together more than 80 scientists involved in coral reef knowledge from the 9 main French institutions (EPHE, University of Reunion, University of New Caledonia, University of French Polynesia, University of the West Indies, IRD, Ifremer, CNRS-INEE and EHESS) and constitutes the image of French research in coral reefs.

Finally, Serge Planes was appointed to the scientific direction of the Tara Pacific expedition, which was launched in May 2016 and lasted more than 2 years across the Pacific Ocean. Tara Pacific is a scientific expedition, but it is also the coordination of a consortium of nearly 20 researchers from more than 8 different organisations that represents a real scientific and organizational challenge. This expedition, mounted with the support of the Genoscope, will make it possible to acquire the largest genomic base on coral in existence, with a specific focus on the microbiome.

# **PERFORMANCE INDICES**

#### **Research Contracts**

More than 90 research contracts since 1995 Roughly 20 M€ in total managed contracts

### **Direction of Research**

Supervision of 22 Post-Doctoral Researchers achieved and 4 in progress Supervision of 21 PhD theses achieved and 5 in progress Supervision of 66 Master Research projects achieved and 5 in progress

### **Field Work**

On average, 2 to 3 field trips of 2 to 8 weeks duration, annually since 1990
Nearly 58 islands in French Polynesia visited and sampled
(all of the Marquise Islands, all of the Australes, all of the Gambiers, 10 of the Society Islands, 30 atolls in the Tuamotu)

6 field seasons on the Great Barrier Reef (Australia)

14 field trips in Papua New Guinea

A variety of field trips throughout the Pacific (Taiwan, Philippines, Palau, Guam, Hawaii, Fiji, Solomon Islands, New Caledonia, Entrecastaux, Coral Sea, Wallis, Samoa, Tonga, Cook Islands, Pitcairn, Futuna)

A variety of field trips in the Indian Ocean (Oman, Kuwait, Reunion Island, Madagascar, Mayotte, Glorieuses, Mozambique, Tanzania)

### **Publications**

**Google Scholar**: Total references: 448; Total citations: 16952; h-index: 67 **Web of Science**: Total references: 285; Total citations: 10,970; H Index: 56

# Conferences

more than 100 seminars and presentations at National congresses and International congresses, including 17 as guest speaker.

# **RESEARCH CONTRACTS**

In total, I have coordinated or participated in nearly 90 regional or territorial (in the context of Polynesia), national or international research contracts for a total amount of nearly 22 million euros managed over 25 years of career. The following list highlights the main contracts.

- 1 PIA contract LabEx CORAIL project as coordinator (€6.5 million)
- 8 European contracts, including 1 as coordinator and 6 as Work Package leader (€2.9m)
- 6 ANRs, including 2 ANRs as coordinator and 4 ANRs as collaborator (€1.0m)
- 1 contract with France Genomique as coordinator (€1.2 million)
- 6 contracts with Foundations (Total, Moore) including 3 as coordinator (€1.5m)
- 5 contracts with the Agency for Marine Protected Areas (AFB at present) as coordinator (900 K€)
- 3 regional contracts with the Languedoc-Roussillon and Occitanie region and the CG des Pyrénées Orientales (€1.2 million)
- 7 State-Territory contracts in French Polynesia, including 3 as coordinator and 1 as partner (€2 million)
- 12 contracts with the Environment Department in Polynesia (€1.0 million)
- 9 contracts with the Marine and Mining Resources Department in Polynesia (€1.4 million)