



ISAAC PERAL

CARTAGENA, SPAIN, 1851 - BERLIN, GERMANY, 1895

Isaac Peral was quite fond of the sea since his early childhood (when he was eight he had permission to wear the uniform of the Spanish Navy thanks to a privilege granted to his mother by Queen Elizabeth II). He soon entered the Naval Academy, where he stood out because of his exceptional mathematical skills. He served in the Cuban War, in the Third Carlist War and in the Philippines. In 1883 he became professor of Physics and Mathematics at the Navy College for Further Education, where he conceived an electrically-propelled submarine weapon, a reflection of Verne's *Nautilus*. The Caroline Islands Crisis (1885) led him to propose his idea to the Cabinet. The Minister of the Navy, Manuel de la Pezuela, gave him his support to build his first prototype, the *Peral*, which was successfully launched and tested in 1888. The craft proved to be perfectly capable to fire a torpedo undetected. However, the ministers after De la Pezuela considered it an irrelevant invention and began to discredit Peral. This made him leave the Navy and establish several companies to exploit his electrical patents. He found an early grave in Berlin, in 1895, due to a skin cancer.



JEAN PAINLEVÉ

PARIS, FRANCE, 1902-1989

The biologist Jean Painlevé is considered a pioneer of scientific cinema. He shot over two hundred films featuring aquatic creatures. The lyricism and evocative power of his works, inspired by the creations of Jules Verne and Georges Méliès and with jazz soundtracks, prompted the rejection of the academia and the admiration of the surrealists, particularly of Luis Buñuel, who asked him to film the scene of the ants for *An Andalusian Dog*. Painlevé was not part of this vanguard, but shared its interest in procreation and psychosexual stimulation, an element that he studied in several species like the octopus, the jellyfish or the seahorse, and that he filmed in scenes halfway between scientific documentaries, experimental art and erotic cinema. In 1934, Painlevé founded *Le Club des Sous l'Eau* together with Captain Yves Le Prieur, the developer of the scuba system that allowed to film underwater and would later be used by Jacques Cousteau. Inventors, artists and treasure hunters joined this scuba club, the first of its kind in the world, where submarine filming techniques were promoted.



LOUIS MARIE-AUGUSTE BOUTAN

VERSAILLES, FRANCE, 1859 - TIGZIRT, ALGERIA, 1934

In *Twenty Thousand Leagues under the Sea*, Captain Nemo takes a picture of the sea bed from the Nautilus before a bewildered Pierre Aronnax. That feat would only be feasible twenty years later. A pioneer of underwater photography, Louis Boutan studied Biology and Natural History at the University of Paris and, since 1884, he studied Marine Biology at the prestigious Laboratoire Arago in Banyuls-sur-Mer. In 1886 he learned to dive in order to improve his research on a species of limpet that is unable to survive in laboratory aquariums. And, in 1892, he intended to take pictures of underwater wildlife with the help of his brother, who built a waterproof box for a detective camera. After successfully testing the device, he decided to create a large amphibious camera with a more luminous lens. He used it to take his first pictures, sometimes with the help of a magnesium flash. He finally used a remote-control camera, featuring an electromagnet and two watertight electric arcs for lighting purposes, to take the first pictures deeper than fifty meters.



MIGUEL RAMOS CARRIÓN

ZAMORA, SPAIN, 1848 - MADRID, SPAIN, 1915

At the end of the 19th century, French influences took over the Spanish scene. Even the *zarzuela* adopted mannerisms from the *opéra comique* and borrowed plots from popular authors. The works of Jules Verne, full of dramatic effects and theatrical retorts that prompted the applause, offered a wealth of scenographic and musical possibilities. Between 1875 and 1880, the theatre company *Los Bufos Arderius* performed at the Teatro del Príncipe Alfonso (Paseo de Recoletos, Madrid) several adaptations of his novels, amongst them *In Search of the Castaways*, with music by Manuel Fernández Caballero and lyrics by Miguel Ramos Carrión, one of the most popular comedic playwrights of his time. It was presented as a "great cosmorama" and premiered in 1877 "with extraordinary luxury". Although Ramos Carrión kept the sceneries of the novel and the trip around the globe following the 37° 11' parallel south, he added some elements that were familiar for Spanish audiences, thus combining exotic and local atmospheres. After its premiere, the play was performed at the Teatro Apolo, with continued success. A version by Paco Mir staged at the Teatro de la Zarzuela in 2001 still enthral audiences.