

The driving force behind the doctrine and scientific strategy of the Port-Cros National Park (Provence, France): Jannick Olivier (1948-2019)

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Abstract. Jannick Olivier was born in 1948 in Bizerte (Tunisia). She was the daughter of Janine Parascandola and Guy Canton, who enlisted in the French Air Force. He went missing in action in 1954 in Indochina: at 6 years old, Jannick was fatherless. She studied biology and ecology, then regional management and planning. This dual academic background was to prove to be an asset in her career. She started work in 1975 at the Port-Cros National Park (PCNP) and remained there until 1998, as a scientific attaché. Between the chair of the Board of Administration, the director, the chair of the Scientific Council (SC) and the staff of the PCNP, she played a key role, and thanks to her multidisciplinary training and her gift for human relations, she was deeply involved in the development of the PCNP doctrine. This doctrine is based on five cornerstones. (i) Real protection and management, based on results from scientific research, with park wardens enforcing bans and zoning. (ii) The existence of a SC providing the park authority with technical advice and undertaking scientific studies; it is important to emphasize that the existence of a SC is one of the dividing lines that separate really protected areas from the 'paper parks'. Over time, the SC has been rejuvenated and refocused as necessary, in a relative stable way, to ensure that the culture of the SC and its ability to co-evolve with the various other bodies of the PCNP are not lost. (iii) The power of the SC: the SC has always worked in concert with the other PCNP bodies, thanks to Jannick Olivier, who was both the inspiration and the architect of this cohesion; the SC thus achieved both respect and credibility. The participation in the SC of PCNP staff (director, department heads, park wardens) and of the chairman of the Board of Administration ensures the bottom-up and top-down transmission of information and the pertinence of deliberations. (iv) Active scientific research. And (v) publishing a scientific journal; this ensures that the data and management experience acquired is not lost. One of the major programmes that Jannick Olivier has piloted is the French programme focused on the seagrass *Posidonia oceanica*. This led to the organization of an international workshop in 1983, the publication of the Proceedings in 1984, the legal protection in France of *P. oceanica* in 1988, then its inclusion in Annex I of the European Union Habitats Directive in 1992. In 1998, when Louis Olivier, Jannick's husband, was appointed director of the Mercantour National Park, Jannick decided to follow him and leave the PCNP; it was a difficult choice, because she was passionately committed to her work and enjoyed widespread recognition, in France and abroad. In 1995, Jannick discovered that she had cancer. She faced the ordeal with courage and determination. In 1996, she was considered cured, but after 13 years of remission, the disease started to manifest itself again. It finally won the battle in 2019. Jannick Olivier leaves an *oeuvre*, in the French sense of the term: she made a major contribution to the development of the doctrine and scientific strategy of the Port-Cros National Park, and their sustainability over time.

Keywords: Jannick Olivier, Management, Mediterranean, Monk seal, National Park, *Posidonia oceanica*.

Résumé. À l'origine de la doctrine et de la stratégie scientifique du Parc national de Port-Cros (Provence, France) : Jannick Olivier (1948-2019). La mère de Jannick Olivier, Janine Parascandola, descendait d'immigrés catalans et italiens et vivait à Alger. Son père, Guy Canton, descendait de grandes familles d'Auvergne et de chrétiens maronites du Liban ; conformément à la tradition familiale, il embrassa la carrière militaire, dans l'aviation. Janine Parascandola et Guy Canton se rencontrèrent à Alger. Jannick naquit à Bizerte (Tunisie) en 1948. À six ans, elle était orpheline de père : son père disparut en effet lors de la bataille de Dien Bien Phû, en Indochine. Lors de l'indépendance de l'Algérie, en 1962, Jannick et sa mère firent partie du million de réfugiés qui fuirent l'Algérie. Elles s'installèrent à Marseille, où Jannick poursuivit ses études : Lycée Montgrand (baccalauréat en 1967), puis Faculté des sciences de Marseille.

À la Faculté des Sciences de Marseille, Jannick suivit d'abord des études de biologie. Elle obtint sa maîtrise en 1972. Plutôt que de continuer par une thèse, elle préféra s'engager dans l'aménagement et la gestion, à l'Institut d'Aménagement Régional (IAR), ce qui lui donnera une double compétence en biologie et en gestion, qui s'avèrera précieuse dans la suite de sa carrière.

En 1975, Jannick fut chargée par le Parc national de Port-Cros (PNPC, Provence, France), comme chargée de mission, de réunir et synthétiser les données biologiques sur la baie de Hyères (où se situe l'archipel de Port-Cros). En 1976, elle fut recrutée sur le poste d'attachée scientifique, nouvellement créé. Elle se trouva alors au centre de la 'constellation' constituée par le président du Conseil d'Administration (CA), le directeur du Parc national, le président du Conseil scientifique (CS) et les agents du Parc national. Par chance, ces personnalités s'entendaient bien. La formation pluridisciplinaire de Jannick et son sens des relations humaines participèrent largement à l'élaboration de ce qui sera la doctrine du PNPC. En outre, alors que les présidents du CA et du CS, ainsi que le directeur du PNPC, changent rapidement, Jannick a su représenter la continuité et la transmission de la doctrine du PNPC.

La doctrine du PNPC, qui s'est élaborée avec et grâce à Jannick Olivier, peut se résumer en cinq points. (i) La réalité de la protection et de la gestion. Cela peut sembler trivial. Mais la majorité des aires protégées sont des 'parcs de papier' (paper parks), purement fictifs en l'absence de CS, de gardes, parfois même de directeur, ou des 'parcs de brouillard' (*mist parks*), dont l'existence est réelle mais dont le pouvoir est velléitaire, permettant aux États de 'faire du chiffre' face à leurs engagements internationaux. (ii) L'existence d'un CS. Le CS du PNPC, depuis près de 60 ans, a toujours été renouvelé seulement en partie (tous les 4-7 ans), de façon à favoriser la transmission et la continuité de sa doctrine. (iii) Le pouvoir du CS. Le CS a toujours travaillé en concertation avec les autres organes du PNPC. Il y a acquis respect et crédibilité. La participation au CS des agents du PNPC (directeur, chefs de service, agents de terrain) et du président du CA assure la transmission *bottom-up* et *top-down* de l'information et l'efficacité des débats. (iv) Une recherche scientifique active, basée sur le principe que l'on ne protège bien que ce que l'on connaît bien. Les priorités ont bien sûr évolué au cours du temps. (v) La publication d'une revue scientifique. En plus de constituer un lien avec le territoire du PNPC, elle permet de diffuser les résultats et représente donc une bonne utilisation de l'argent public destiné aux recherches. Cette doctrine, comme l'efficacité de la gestion du PNPC, ont valu à Jannick Olivier, ainsi qu'à son directeur et aux membres du CS, d'être souvent invités à des congrès, conférences et réunions techniques, dans divers pays méditerranéens, pour y présenter le PNPC.

L'un des grands programmes que Jannick Olivier a pilotés est le programme posidonie. Il répondait à la régression inquiétante des prairies à *Posidonia oceanica*. Il impliquait, à la demande du Ministère français de l'Environnement, la création d'une structure susceptible de gérer ce programme ; ce fut le GIS Posidonie (Groupement d'Intérêt Scientifique), créé en 1982. L'événement fondateur fut l'organisation d'un congrès international (*International Workshop on Posidonia oceanica Beds*) en 1983, à Porquerolles, auquel Jannick prit une part déterminante, puis la publication des actes, un ouvrage de 454 pages, en 1984. La

protection légale en France de *P. oceanica*, en 1988, puis son inclusion dans l'Annexe I de la Directive Habitats (directive européenne), en 1992, ont été la suite logique de ce congrès. Un autre grand programme fut le programme phoque moine (*Monachus monachus*), une espèce en danger critique de disparition. Ce fut malheureusement un échec tragique, avec la disparition en Mauritanie de quatre des participants à une mission scientifique. Enfin, Jannick Olivier s'est impliquée dans la création de MEDPAN, le réseau des gestionnaires d'Aires Marines Protégées en Méditerranée.

En 1998, quand Louis Olivier, le mari de Jannick, fut nommé directeur du Parc national du Mercantour, Jannick décida de le suivre et d'abandonner le PNPC. Ce fut un choix difficile, car elle était passionnée par son travail et y était largement reconnue, en France et à l'étranger. En 2015, quand Louis Olivier, alors directeur de l'Office National des Forêts en Corse, prit sa retraite, tous les deux partirent pour la Bretagne.

En 1995, Jannick découvrit qu'elle était atteinte d'un cancer. Elle affronta l'épreuve avec courage et volonté, se soignant (radiothérapie et chimiothérapie) tout en continuant à travailler. En 1996, elle fut considérée comme guérie. Malheureusement, après 13 ans de rémission, en 2009, la maladie se manifesta à nouveau. Elle l'emportera en 2019.

Jannick Olivier laisse une œuvre, au sens le plus fort du terme : elle a très largement contribué à l'élaboration de la doctrine et de la stratégie scientifiques du Parc national de Port-Cros, et de leur pérennité dans le temps, qui ont assuré son efficacité et son succès, en même temps que sa notoriété à l'échelle internationale.

Mots-clés : Gestion, Jannick Olivier, Méditerranée, Parc national, phoque moine, *Posidonia oceanica*.

Youth and education

Jannick Olivier's mother, Janine Parascandola, was born in Algiers. Algeria was then a French colony. She was descended from Spanish immigrants, Catalan speakers, and Italians, from the island of Procida, near Naples. She worked as a secretary in a bank, *Crédit Foncier*.

Her father, Guy Canton, belonged to a family where a military career was a tradition. His origins were in the Auvergne and in a family of Maronite Christians in Lebanon. Lebanon was then a French protectorate. Her Lebanese grandfather had the highest title in Lebanon as it was then, that of Bey. Guy Canton followed the family tradition and chose a military career, enlisting in the French Air Force. One of his ancestors was *aide-de-camp* to the French general Donatien de Rochambeau, who fought in the American War of Independence (1775-1783). During the World War II, when France was occupied by Nazi Germany, Guy Canton joined the underground French *Résistance*, under the pseudonym of Serge Colas. Arrested by the Gestapo, the official secret state police of Nazi Germany, on March 21, 1944, he was deported to the notorious Buchenwald concentration camp, in Germany. Guy Canton was one of the emaciated survivors released on April 11, 1945, by a detachment of troops of the U.S. Third Army. He weighed only 35 kg on his release. After rejoining the French Air Force, he was stationed in Algiers. There

he met Janine Parascandola. They got married; subsequently, he was transferred to Bizerte, Tunisia, then a French protectorate.

Their daughter Jannick was born in Bizerte, Tunisia, on April 27, 1948. Guy Canton joined the paratroopers, and was again transferred to Algiers. He volunteered to go to fight in Indochina (now Vietnam) and was parachuted on March 14, 1954 to Dien Bien Phû, where the French army suffered a tragic defeat. He was reported missing in action. At the age of 6, Jannick was fatherless.

The year 1954 also marked the start of the Algerian war of independence. Before and after the independence, obtained in 1962, more than a million people, mainly French, fled Algeria. Jannick's family was among these refugees. She moved to Marseille, where Jannick resumed her secondary education at the Lycée Montgrand. The welcome given to the '*pieds-noirs*', even in a city as multicultural and cosmopolitan as Marseille - founded by the Greeks 2 600 years ago, populated by Corsicans, Italians, Catalans, Armenians and so many other waves of immigrants - was anything but cordial. '*Pieds-noirs*' was the popular nickname, sometimes a little derogatory, given to Europeans born in Algeria during the period of French rule from 1830 to 1962. The Lycée Montgrand was the secondary school frequented by children of the Marseille upper classes, and it cost Jannick a considerable effort to gain acceptance, first as French, then as a schoolmate.

After her *baccalauréat* in *Sciences expérimentales*, obtained with distinction in 1967, Jannick began graduate studies in animal biology at the Faculty of Sciences of Saint-Jérôme (Aix-Marseille University). She met lecturers there whom she admired, and with whom she kept in close contact during her subsequent professional career. She also met her first husband, Loïc Lemaire, the father of her first child, Olivier, born in 1972, an 'easy' baby, a sleeper, whom she was able to raise while working on her course work and preparing for exams.

One of the lecturers Jannick most admired was Professor Roger Molinier. Roger Molinier (1927-1991) was not the kind of haughty, distant professor, that students dared not approach. He turned up at the faculty driving his car, the back seat covered with a large plaid on which sat enthroned *Volga*, his cocker spaniel. He greeted the security staff, parked and then walked up to his office and put on his white coat. This is how he looked in the lecture hall. The students were very appreciative both of his knowledge and the new ideas he regaled them with, and of his openness and his human side. There was never any heckling in his lectures, except from a desire to prolong the scheduled teaching time to be able to speak with him and get to know him better (Boudouresque and Olivier, 2013). Roger Molinier was also the university lecturer that

the author of the present article (CFB) most admired, first for his talent for teaching and his enthusiasm, at a time when many teachers thought that a good lecture had to be boring and/or incomprehensible, and then for his commitment to the protection of the environment, at a time when such a commitment was severely condemned by the academic establishment (Boudouresque, 1992; Boudouresque and Olivier, 2013).

After obtaining her master's degree in life sciences (then called '*Maîtrise*' in France), in 1972, Jannick decided not to go on to take a PhD. She found it more interesting and more promising for the future to apply her knowledge of biology and ecology to regional management and planning, a new discipline at the time. She passed the entrance exam to the Aix-en-Provence Regional Management Institute (*Institut d'Aménagement Régional* - IAR). Roger Molinier was one of the teachers of this three-year course.

Jannick Olivier's early years at the Port-Cros National Park

Roger Molinier was chairman of the Scientific Council of the Port-Cros National Park (PCNP), a position he held from 1970 to 1986. The PCNP, established in 1963, in Provence (southern France), was the only both marine and terrestrial national park in France (at that time), and the second oldest in the Mediterranean, after that of Mljet, in Croatia, founded in 1960 (Augier and Boudouresque, 1973; Boudouresque, 1976; Bougeant, 1990; Kružić, 2002; Barcelo and Boudouresque, 2012). In 1975, Roger Molinier informed Jannick that the director of the PCNP, René Ravetta, was looking for a scientist to collect scientific data on the flora and fauna of the Bay of Hyères (where the PCNP is located) and to produce a synopsis of it. He introduced Jannick to René Ravetta, and Jannick was recruited for a fixed-term contract, as *chargée de mission* (Research Assistant). It was a difficult but exciting job. Difficult, because Jannick needed a lot of tact and diplomacy, as a very young recent graduate, to be accepted by senior researchers, each a 'big name' in his field, and sometimes rather patronizing. Exciting, because Jannick realized that there was a wealth of opportunity in this still very young national park. She was really keen to play a role in this great adventure, the development of this national park. Jannick worked very hard and soon made herself indispensable. One morning in 1976, the PCNP Director, René Ravetta, announced to her that the Ministry of the Environment had just created a post of scientific attaché at the PCNP, a post he offered her and which she enthusiastically accepted. The success story of Jannick with the PCNP began then. It lasted until 1998 (Fig. 1).



Figure 1. Jannick Olivier at work, in her office, at the headquarters of the Port-Cros National Park (PCNP), in Hyères, in 1979. Photo © Port-Cros National Park.

In the relatively ‘young’ Port-Cros National Park, Jannick Olivier was in a way at the heart of the action. Her dual academic background as a naturalist and environmental manager proved to be a precious asset. Likewise, her strength of character (no doubt innate, but perhaps also reinforced by the difficult episodes and hardships she had lived through) and her sense of dialogue, important for listening to and convincing people as different and diverse as (i) senior members of the Board of Administration, (ii) the scientists of the Scientific Council, (iii) the successive directors of the PCNP, generally recruited from the Water Resource and Forests agency (*Eaux et Forêts*) and (iv) Park officials confronted with the reality in the field, were qualities that enabled her to express her vision of a national park that was still new and open to change. Jannick was very determined but also pragmatic and was probably not aware, in her day-to-day work, of the importance of her role and her influence. I myself (CFB), first as passive witness, as a young scientist working on the marine environment and member of the Scientific Council, then as active witness as chair of the Scientific Council (1986 to 2018) and Jannick’s close collaborator, and especially as a long term witness of almost 60 years of history of the PCNP, am particularly well placed to understand and appreciate her key role in the development of the scientific and management doctrine and strategy of the PCNP.

As a researcher, Roger Molinier, then chairman of the PCNP Scientific Council, was a pioneer. Ignoring the traditional division between botanists and zoologists, between specialists in the terrestrial environment and specialists in the marine environment, he devoted his doctoral thesis to the integrated study of the fauna and flora of the terrestrial and marine areas of Cap Corse (Corsica) (Molinier, 1960; Boudouresque and Olivier, 2013). He was the first to transpose the methods of terrestrial phytosociologists, with whom he had worked with

his father, Professor René Molinier, to the marine environment. Finally, with Jacques Picard, he described the fundamental role of the *Posidonia oceanica* seagrass meadow in the Mediterranean, and in particular the mechanism of the construction of an original structure, the *matte*; it is in the Bay of Port-Cros that they discovered and described an astonishing structure, which they named '*Posidonia oceanica* barrier-reef' and of which they elucidated its origin and its dynamics (Molinier and Picard, 1952). It was a founding work, which remains today the basis of the whole scientific corpus concerning *P. oceanica*, on which dozens of laboratories are now working (Boudouresque *et al.*, 2012).

From the end of the 1960s, Roger Molinier devoted his knowledge of ecology to the service of environmental management and protection. This sounds perfectly natural today, but it was not so in those distant times. Between the university (and fundamental research) on one side, the administration on the other, there was only indifference and misunderstanding. Seen from the side of the administration and managers, there was a certain condescension for this academic who dared to 'meddle in what did not concern him'; seen from the university side (his colleagues), there was a certain contempt for someone who allowed himself to become tainted by a world which was not his own, who moved away from basic research (Boudouresque, 1992). In his commitment to protecting the environment, Roger Molinier was also a pioneer. He was also a precursor by his vision of Man as an integral part of nature, by his refusal to see any conflict between the protection of nature and Man, in other words by his humanism. In a way, he anticipated the notion of sustainable development which was to be popularized twenty years later, at the 1992 Rio Summit that he could not attend, since he died prematurely on April 1st, 1991, of cancer. Roger Molinier, unlike other environmentalists, advocated compromise; he wrote that it was necessary to avoid confusing 'two terms so close in their consonance, so distant in their resonance, the first imbued with nobility, the second smeared with opprobrium: 'compromise' (seeking the middle ground; in French *compromis*) and 'compromising' (compromising your principles; in French *compromission*)' (Molinier, 1991).

The doctrine and scientific strategy

It was the meeting of four remarkable and complementary personalities, in the early 1970s, that marked the true birth of the Port-Cros National Park, with the dynamic that is still its own, with the desire for excellence that made it one of the most efficient and renowned national parks in the Mediterranean, and with the emergence of a doctrine which has been the source of its strength, while evolving over time. (i) René Ravetta was the first full-time director (between 1973

and 1979) of the PCNP. Before him, the park was administered by the director of the Water Resource and Forests agency (*Eaux et Forêts*) of the Var department (Eastern Provence), in Toulon. André Manche, who succeeded him, expressed and took actions on environmental concerns, which is unusual for a senior official. The PCNP now had its own premises, located in Hyères, the municipality (*commune*) in which the Port-Cros Archipelago is located. (ii) Roger Molinier was the Chair of the Scientific Council (from 1970). His scientific culture, his multidisciplinary background (terrestrial and marine, botanical and zoological), his humanism, his sense of compromise, his commitment to the protection of the environment in a context of sustainable development (see above), his eloquence, compelled support or at least respect among everyone he had dealing with, from artisanal fishermen to the *Préfet* (senior State representative) of the French republic. (iii) Christian Delaballe was Chair of the Board of Administration between 1970 and 1980. The Board of Administration is made up of representatives of the French State (Ministries of the Environment, culture, education, etc.), local elected representatives, including the mayor of Hyères, representatives of business and stakeholders (artisanal fishermen, diving clubs, tourism, etc.) and of environmental protection NGOs. (iv) Finally, Jannick Olivier, the youngest and with the least official ‘power’, had the ear of all three. She was not at all an *éminence grise*; but I am convinced that, thanks to her culture which was at the same time natural science focused, administrative and managerial, and of course to her discreet but effective charisma, Jannick was the link which transformed good personal relationships and the advantage of starting with a blank page into a success story: the emergence of the doctrine of the PCNP. In addition, while the players (Chair of the Board of Administration, director of the PCNP, Scientific Council), change more or less quickly, it was Jannick who ensured the continuity and enduring quality of this doctrine (Fig. 2).



Figure 2. From left to right: Isabelle Mazinski, Jannick Olivier and Louis Olivier (then Deputy Director of Port-Cros National Park), in 1996, during a meeting at the PNPC headquarters in Hyères. Photo © Port-Cros National Park.

The scientific and management doctrine of Port-Cros National Park (PCNP), which was developed collectively but to a large extent thanks to Jannick Olivier, and which has been maintained and perfected until today, is based upon five cornerstones.

(1) Real protection and management, based as far as possible on results from scientific research, with park wardens enforcing bans (e.g. fishing, anchoring) and zoning according to the various uses (e.g. artisanal fishing, diving, mooring, bathing). It is important to emphasize that in the Mediterranean as in many other regions in the world, the majority of protected areas, especially in the marine environment, are 'paper parks' or 'mist parks' (Sale *et al.*, 2010; Sala *et al.*, 2012; Meinesz and Blanfuné, 2015). This of course concerns countries such as Greece, Tunisia, Algeria and Morocco (e.g. the Al Hoceima National Park; Monti *et al.*, 2013), but also theoretically 'virtuous' countries such as Italy (see e.g. Francour *et al.*, 2010) and France. The **paper parks** are protected areas without park wardens, management plan, scientific council or even director; in a way, they amount to a piece of paper in the desk drawer of the office of a minister who does not even know the contents of his own drawers. **Mist parks** are protected areas intended to fulfill the international commitments of countries; they are often immense, have a real existence (director, premises, officials), but do not implement any real management measures involving, where necessary, constraints for some of the users (see e.g. Meinesz and Blanfuné, 2015). In contrast, since its creation, and especially since the early 1970s, the PCNP has always been a real protected area, with effective surveillance by park wardens strictly enforcing the management rules, despite a legal arsenal which, in France, until 1992, especially in the marine environment, was in some respects deficient.

(2) The existence of a Scientific Council (SC). A SC is made up of personalities chosen on the basis of their field of expertise and has the responsibility for providing the park authority with technical advice and undertaking such studies as are entrusted to it (Boudouresque *et al.*, 2013a). The first SC of the PCNP was set up on 30 October 1964, just 10 months after the establishment of the National Park. Since then, the SC of the PCNP has been reconstituted 10 times. Reconstitution of the SC, every four to seven years, was based on a balance between rejuvenation, the necessity of making room for new disciplines, and continuity. It was important that the SC 'culture', its capacity for 'co-evolution' in phase with the Scientific Department and the Director of the National Park, should not be lost. For this reason, the rate of re-nomination of outgoing members of the SC has always been relatively high (on average 60 %) (Boudouresque *et al.*, 2013a). It was Jannick Olivier, during her more than 20 years at the head of the Scientific Department of the PCNP, who initiated this good practice, that her successors have continued.

It is important to emphasize that the existence of a Scientific Council is one of the dividing lines that separate the real protected areas from the paper parks.

(3) The power of the Scientific Council. A Scientific Council can be just a kind of showcase. Experts disconnected from reality can discuss matters freely and expertly and give opinions which may be either unrealistic or relevant, but which in both cases will go no further than the door of the meeting room. This was never the case at the PCNP. Thanks to Jannick Olivier, at the same time the inspiration and the architect of the bridge linking the director of the Park, the Scientific Council, the Park staff and the Board of Administration, a culture of consensus and efficiency has been built. The SC thus gained credibility, respect and power. In almost 60 years of existence, the Board of Administration or the director have never opposed an opinion from the Scientific Council. At the PCNP, the director, the Chair of the Board of Administration and park staff (field officers and administrative officers) attend meetings of the SC. They can express their opinion, even if they do not have a vote. This bottom-up and top-down strategy is very effective: information circulates and it is understood (Boudouresque *et al.*, 2013a). This strategy may seem obvious but is not widespread: at a meeting of the chairs of SC of French national parks, about a dozen years ago, the president of the SC of a French Alpine national park declared herself deeply shocked when the author of this article (CFB) described the broad-based membership of the PCNP scientific councils: -'But are you not afraid that the director will influence your opinions?' I replied: -'If the director influences the SC, it is because he has good arguments; on the other hand, the SC can have all the more influence on the director when it takes part in the debates'.

(4) Active scientific research. Scientific research constitutes a pivotal basis for protection and management: we only effectively protect and manage what we know well. From its creation, the PCNP has been the site of very active research. Today it is one of the best known sites in the Mediterranean (Augier and Boudouresque, 1973, 1974, 1975, 1976; Barcelo *et al.*, 2013a, 2013b; Boudouresque *et al.*, 2013b; Farsac *et al.*, 2013; Médail *et al.*, 2013; Barcelo *et al.*, 2014). Over time, the priorities have of course changed, the inventories of species and habitats giving way to more work focused on e.g. ecosystems, management and social sciences (Barcelo and Boudouresque, 2012; Farsac *et al.*, 2013; Gérardin, 2013; Boudouresque *et al.*, 2020). Jannick Olivier was deeply involved in the scientific policy of the PCNP: research programs on the seagrass *Posidonia oceanica*, on the monk seal *Monachus monachus*, the creation of the GIS Posidonie and of MedPAN (Network of Marine Protected Areas managers in the Mediterranean), etc. (Boudouresque and Meinesz, 1982; Marchessaux, 1989a; see below). Her impetus was

strong enough for this policy of involvement in major research programs, French and European, to continue until today.

(5) Publishing a scientific journal. In the early 1970s, the French Ministry of the Environment asked the seven national parks that then existed to each create a scientific journal. The objective was and still is of paramount importance: to publish the results of research carried out in the parks, to present their management experience and to bring them to the attention of the scientific community and managers, both locally and all over the world. Unpublished works (gray literature), even when they are, often provisionally, available on the internet, quickly fall into oblivion. It is not uncommon for a government agency (sometimes the French Ministry of the Environment itself) to finance studies on a subject on which unpublished studies already exist. Publishing a scientific journal, for an annual cost sometimes lower than the cost of a single study, therefore represents an economical and efficient use of public money. Only three national parks responded positively and created a scientific review: the Vanoise National Park, the Pyrenees National Park and the PCNP. But after a few years, the first two gave up. Only the PCNP persisted. It is true that publishing a quality scientific journal is time consuming for Park staff and for the SC. The first issue of the 'Travaux Scientifiques du Parc National de Port-Cros' was published in 1975. From the second issue, Jannick's name appeared among the editors. Almost 50 years later, this scientific journal is still running. In 1988, it became 'Scientific Reports of the Port-Cros National Park' (SRPCNP) and began to publish articles in French or English. It was Jannick Olivier who was able to persuade people as remote from the scientific world as the park director of the importance of a scientific journal. Admittedly, there are many scientific journals, in particular international journals, and many studies can be published there; but publishing basic data whose interest, at the moment, may seem low, is not always easy; a journal like the SRPCNP is therefore essential. Some articles published in the SRPCNP have been cited dozens of times, up to 200 times (e.g. Boudouresque, 2004), which demonstrates their real impact. Jannick will not read volume 34 of the SRPCNP, with the present article, but we must give profound thanks to Jannick who was able to defend the existence of the journal before successive directors.

(6) A sixth cornerstone is to keep management interventions at a minimum, but it was forged in the years 2000s and 2010s, after Jannick left the PCNP. It is based on the fact that a protected area is neither a botanical garden nor a zoo, that its role is not to favour certain species at the expense of others, even if they are protected species, that the nature often does things better than humans and that doing nothing sometimes constitutes a management action (Boudouresque *et al.*, 2020).

The scientific strategy of the PCNP first materialized indirectly through management plans. Later, it was the subject of specific documents (e.g. Barcelo *et al.*, 2013a).



Figure 3. Working meeting at CERP (*Centre d'Études et de Recherches sur la Pêche*) of Bou-Ismaïl (Algeria). From left to right: X, Kadari (director of CERP), Zenasmi (Financial department of CERP), Alain Jeudy de Grissac (SC of the PCNP), Jean-Robert Lefèvre (Department of Equipment, French Riviera), Pierre Bougeant (director of the PCNP) and Jannick Olivier (scientific attaché of PCNP). Photo © Charles-François Boudouresque.

The effective management of the PCNP, its doctrine, its scientific strategy and its scientific review have earned it a certain international reputation. Jannick Olivier, the director of the PCNP and/or Chair of its SC, were often invited to present, at international symposiums, in lectures for the general public, or during technical meetings, in Europe, in Africa and in South America, the mode of operation of the PCNP (e.g. Olivier, 1987; Boudouresque, 1989; Bougeant, 1990; Fig. 3). This policy of experience-sharing continues today (see e.g. Gaymer *et al.*, 2020).

The seagrass *Posidonia oceanica* and major scientific programmes

The first major research programme that Jannick Olivier carried out was the French *Posidonia oceanica* programme. The importance of *P. oceanica* seagrass beds and their ecosystem services (a term that had not yet been coined) had been suggested (Molinier and Picard, 1952). The severe regression of seagrass beds had been highlighted (see Boudouresque *et al.*, 2009). But what should be done? Thanks to Jannick Olivier, the PCNP was instructed by the Ministry of the Environment to organize an international workshop intended to review the issue, to

build an ambitious research programme focused on understanding the functioning of the *P. oceanica* ecosystem and to identify the causes of its regression, and finally to create a structure intended to manage the programme and funding. (i) The workshop (International Workshop on *Posidonia oceanica* Beds) took place at Porquerolles, the neighbouring island to Port-Cros, where most of the territory was State-owned (since 1974) and the management of which was later entrusted to the PCNP. The workshop (12 to 15 October, 1983) was organized by Jannick Olivier and Alain Jeudy de Grissac (Fig. 4). Both discovered, on a spectrum between enthusiasm and improvisation, the complexity of organizing such an event: welcoming 250 participants from fifteen countries, feeding them and housing them; also welcoming personalities from several French and foreign ministries, as well as politicians and journalists; fitting out a hall, which became the congress hall, at a site which had never held such an event, etc. (Olivier and Jeudy de Grissac, 2013). But the work did not stop there: after the workshop, there was the publication of the proceedings (a 454-page book), in which Delphine Willsie actively collaborated, in addition to Alain Jeudy de Grissac and Jannick (Fig. 5; Boudouresque *et al.*, 1984). (ii) The research program brought together all the French laboratories working or likely to work on *Posidonia oceanica*; it spanned almost 10 years and was taken over by an European Union (EU) programme involving Austria, Belgium, France, Greece, Italy and Spain. (iii) Finally, the structure intended to organize the workshop and manage the research programmes was created in the form of a scientific interest group (*Groupement d'Intérêt Scientifique* - GIS) and took the name of GIS Posidonie. Its founders, on April 1st, 1982, were Alain Jeudy de Grissac (member of the PCNP Scientific Council), Roger Molinier (Chair of the SC of the PCNP), Jannick Olivier (Scientific attaché of the PCNP) and Patrice Lardeau (External Relations Officer at CNEXO, the French organization in charge of oceanography) (Fig. 6; Boudouresque, 2013a; Olivier and Jeudy de Grissac, 2013; Panayotidis, 2013). The headquarters of GIS Posidonie were first located at Porquerolles, on the premises of the PCNP; later, they were transferred to Marseille (Aix-Marseille University).

One of the consequences of the Porquerolles workshop was, in 1988, the legal protection of *Posidonia oceanica* in France, followed by its inclusion in Annex 1 to the EU Habitats Directive (Pergent, 1991; Boudouresque *et al.*, 1994, 2012; Boudouresque, 2013b). This protection is all the more remarkable since it was the first marine species to be protected (except for the marine taxa which are relatives of terrestrial taxa: sea birds, sea mammals and sea turtles) (see Verlaque *et al.*, 2019).



Figure 4. Alain Jeudy de Grissac (left) and Jannick Olivier (right) meet again, thirty years after the hectic adventure of the International Workshop on *Posidonia oceanica* Beds in 1983. Photo © Louis Olivier.

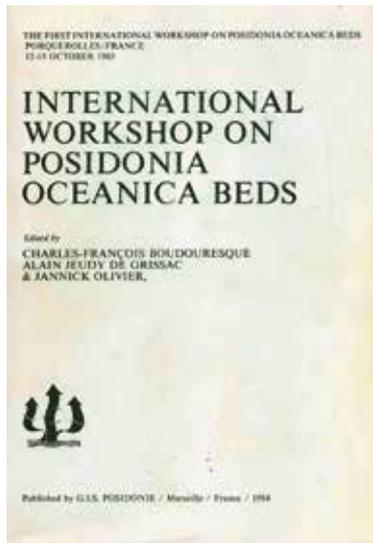


Figure 5. The cover of the proceedings of the International Workshop on *Posidonia oceanica* Beds, published in 1984 (Boudouresque *et al.*, 1984).

Another major programme, with a leading role played by the Port-Cros National Park, the Chair of its SC (then Charles-François Boudouresque), its director (then Pierre Bougeant) and Jannick Olivier, was the monk seal programme, funded by the French Ministry of the Environment. Unfortunately, it was anything but a success story, rather a tragedy that forever marked those who were involved in it, including Jannick Olivier.



Figure 6. Celebration of the 30th anniversary of GIS Posidonie at Porquerolles, in 2013. Three of the four founders are together on the podium (from left to right: Patrice Lardeau, Alain Jeudy de Grissac and Jannick Olivier); Roger Molinier, deceased in 1991, is missing. Right, Charles-François Boudouresque; he is holding the volume specially published for this occasion (Le Diréach and Boudouresque, 2013). Photo © GIS Posidonie.

The monk seal *Monachus monachus* is a warm sea seal that was widely distributed in the Mediterranean and the near Atlantic Ocean, from Portugal to Mauritania. Since prehistoric times, it has been hunted and its populations decimated by man, for its flesh or for its fat. The final blow was struck by fishermen, who mistakenly regarded it as a competitor; they needed a scapegoat to explain the decline in the fish resource, which of course was actually due to their own fishing practices. The monk seal has thus disappeared from the coasts of the western Mediterranean; in western Corsica, the last colony, in Scàndula, was shot dead in the 1970s. The monk seal became very rare in the eastern Mediterranean and in the eastern Atlantic (with the exception of Cap Blanc, Mauritania). It was classified as CR (Critically endangered) in the IUCN Red List (Marchessaux, 1989a, 1989b; Moutou and Rollin, 1990; Boudouresque and Lefèvre, 1992).

The French project was based on breeding in captivity, from individuals from the Cap Blanc colony (Banc d'Arguin National Park, Mauritania), a colony whose carrying capacity seemed saturated and where the capture of individuals could therefore have no negative consequences. The project required many years of study to analyse its biological, political and technical feasibility (Caltagirone *et al.*, 1994; Simon and Moutou, 2010). It came up against harsh criticism from environmental associations, animal welfare advocates and enemies of marinelands. The final blow to the project was the accident which caused the death, in Mauritania, on October 16th, 1988, of Didier Marchessaux, Gérard Vuigner, Alain Argiolas and their driver Elye Ould Elemine, when their vehicle exploded on a mine; Patrice Francour, although injured, was the only survivor of the expedition (Boudouresque *et al.*, 1988).

After Port-Cros

In 1998, Louis Olivier, then Deputy Director (*Directeur adjoint*) of the PCNP, was appointed Director of the Mercantour National Park (*Parc national du Mercantour*), whose headquarters are located in Nice and the territory in the Alps above the French Riviera. Jannick had to reconcile herself to leaving the PCNP. It was a difficult choice for her, because she deeply loved her work, was known and recognized, and was at the peak of her career. However, she chose to go to Nice, in order to live a real family life. There she fulfilled an old dream: studying law. She passed the first year exam, was ranked first in her class, and went on to do a Master's degree (*Diplôme d'Etudes Supérieures Spécialisées* - DESS) in 'Politics of the City'.

Subsequently, Louis Olivier was appointed in 2003 Director of the Cévennes National Park, (*Parc national des Cévennes*), with headquarters in Florac (Occitania) and finally, in 2008, Director of the National Forests Office (*Office National des Forêts* - ONF) for Corsica, in Ajaccio. In 2015, Louis Olivier retired; Jannick and Louis then moved to Binic-Étables-sur-Mer, in Côtes d'Armor (Brittany).

The year 1995, while she was still working at the PCNP, was a very hard time for Jannick. At the beginning of the year, she was diagnosed with cancer. She was operated on, then moved on to chemotherapy and radiotherapy. To keep her spirits up, she decided not to stop working; she went in the evening, after work, to radiotherapy sessions. The chemotherapy sessions took place every two weeks. Jean Besson (1913-1995) was a precious support during this ordeal. A former professional soldier, he fought (with the French Foreign Legion and the 1st Free French Brigade) in the African desert, during the World War II, against the Afrikakorps of the German general Rommel. Passionately interested in ornithology and marine mammals, he was a scientist who was deeply committed to the protection of the environment, and was a member of the SC of the PCNP from 1970 to 1992 (Orsini and Dhermain, 2013). The effectiveness of the treatment, no doubt associated with her indomitable will, meant that Jannick was considered as cured, in 1996, and able to resume a normal life.

Unfortunately, after 13 years of remission, Jannick's cancer started again in 2009. She struggled courageously, trying like the first time to go on living as normal a life as possible, supported by her faith and by Louis. But this time she lost the fight. Jannick died on July 21st, 2019. The urn with her ashes rests in the family vault, at the Saint-Pierre cemetery in Marseille.

Thank you, Jannick! Thanks to your work, your intelligence, your gift for human relations, your broad-based vision of environmental protection,

you left more than a life's work, in French an *oeuvre*, like the cathedral builders of the Middle Ages, a French word with no real equivalent in English. A life's work, a heritage that survives you. In writing this article, the author (CFB) hopes that those who are too young to have known you, and who are now engaged in the protection of nature, in Europe and in the Mediterranean, will know how and why they are indebted to a truly remarkable woman, Jannick Olivier.

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