

TOUR DU VALAT

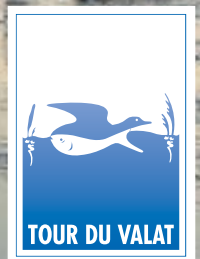
1954 - 2014

100
YEAR

COMMITMENT
TO WETLANDS
AND PEOPLE



A research centre
for the conservation
of mediterranean
wetlands



The Tour du Valat at a glance: 60 years and ...

359 former
and current employees

more than **350,000**
birds of 235 species ringed
by Tour du Valat ornithologists
between 1950 and 1975

more than **29,000**
Greater Flamingos born in the Camargue and
ringed since 1977. The rings have been read
490,000 times in 18 different countries.
Data are centralised and analysed
at the Tour du Valat

approximately
1 000
interns

a herd of
20 250 bulls
and horses grazing
on extensive pastures

872 scientific
articles published

a documentary resource centre unique in
the Mediterranean, with almost
10,000 PhD and other works,
1200 different scientific periodicals
(500 current subscriptions),
and 22,000 reports and articles

100% of our wastewater
is treated by our reed bed water
treatment plant,
100% of our garbage is
sorted and reused or recycled.


wetland conservation projects conducted
in over **twenty** countries,
mainly in the Mediterranean Basin

70 doctoral
degrees awarded for research completed by students
in universities in France, Albania, Tunisia, Algeria, Morocco,
Turkey, Germany, Switzerland, Italy, the United Kingdom,
Holland, and Canada

3000 m² of premises
heated by renewable energy
(8 buildings are heated by
a biomass boiler that uses wood chips
and agricultural waste).

2700 hectares of marsh,
sansouires, wooded area, and farmland in the Camargue
1845 hectares within a Regional
Natural Reserve

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1954/2014

60 year commitment
to wetlands and people

TOUR DU VALAT



Word from the Founder

When I discovered the Camargue at the end of World War II in a devastated Europe, it was an emotional shock, and the beginning of an unquenchable passion for this remote area. Two years later, when I had the opportunity to purchase an estate made up of farmland, vast marshes, and sansouires, at a place called "Tour du Valat", I was a long way from imagining the developments this adventure would entail.

Today, sixty years after having founded the Station biologique de la Tour du Valat, in the evening of my life, I can appreciate what we have accomplished together. Sixty years ago, knowledge about ecosystems was embryonic and hardly oriented towards action at all. Still in its infancy, nature conservation was waged against human beings.

After six decades of action, experimentation, and sometimes even failures, today the Tour du Valat is a highly-respected organisation recognised for its expertise, and influential due to the institutional and especially human networks it has been able to create. From this remote place in the Camargue, initiatives have emerged and spread to the entire Mediterranean Basin all the way to West Africa, and eastward to Mongolia and beyond.

However, these achievements remain fragile when we think about the rapid changes occurring today, and I am forced to acknowledge that in spite of the numerous positive results obtained by conservationists, and wetlands environmentalists in particular, the situation is continuing to worsen. Even in places where the disappearance of wetlands has been stopped, they are not generally managed in a way that enables them to provide the essential support required by nature and to meet the needs of human beings.

Nonetheless, I remain optimistic for the future, because that is my deep-seated nature, which has always led me to undertake new initiatives. But also and especially because the Tour du Valat's achievements over the course of the past sixty years are a tremendous asset for the future. They are both proof of our continually renewed expertise, which enables us to meet emerging challenges, and an encouragement to strengthen collective action, to stimulate the commitment of an increasing number of men and women for wetlands to remain the vital and essential link for biodiversity and human well-being.

What would I do if I had the opportunity to relive this adventure from the start? I would do the same thing... with twice as much effort and persistence.



© Photothèque Tour du Valat

Luc Hoffmann

Tour du Valat Founder and Honorary President

The Tour du Valat over the years...



While he was a biology student at the University of Basel, Luc Hoffmann discovered the Camargue, fell in love with it, and began studying its ecosystems.

The International Waterfowl and Wetlands Research Bureau (IWRB) (which became Wetlands International) was hosted and Mediterranean conservation activities were developed.

1960s

First written document mentioning the Tour du Valat site, which was called *agellus missianianus*, then later Messens.

542

© Tour du Valat

1946



© Tour du Valat



Various fields of wetlands research were developed, such as the management of wetlands by grazing and the ecological requirements of colonial waterbirds.

1970s

The Tour du Valat estate was secularised during the French Revolution and sold in a public auction.

1791

The *Station Biologique de la Tour du Valat* was founded on August 2 as a private research institute, and its "laboratory" was inaugurated.

1954

c. 50 BCE

A settlement with a dwelling, a sheepfold, and a fish-salting area was created in a loop of the River Rhône, in the middle of the current Tour du Valat site.

19th century

The estate changes hands several times. It is made up of marshes, grazing areas and farmland, on which different kinds of grain were cultivated until the mid-20th century.

© Tour du Valat



1950s

The Tour du Valat's activities focus on studying bird populations and their migration, particularly by means of ringing.



Official signing of the Ramsar Convention

1958-1962

MAR project developed by Luc Hoffmann as the first international wetlands conservation initiative.

During the closing conference, organised by the Tour du Valat, a call was made to draft the first international convention on wetlands. Nine years later, the Ramsar convention was signed.

6

1206

The name Tour du Valat appears as a designation for the Messens estate. A defence tower was built along the Rhône at an uncertain date, probably in the 12th century.

1948

Luc Hoffmann purchased the Tour du Valat, 1250 hectares mainly producing rice and wine, while the pastures were rented to ranchers.



© C. Faime





© Tour du Valat

The Sansouire Foundation (now the Tour du Valat Foundation) was created as a French non-profit public benefit organisation that provides legal support for the technical and scientific activities.

Integrated research programmes were developed on habitats and vulnerable species, as well as on new disciplines such as hydrology and geomatics.



Mediterranean Wetlands Observatory

The Mediterranean Wetlands Observatory was launched.



© Tour du Valat

1978



© Tour du Valat

Part of the estate (1071 ha) was listed as a Voluntary Natural Reserve.

1990s

Research and conservation became more highly integrated, particularly via European projects, and contributions were made that shaped public policy.

2007

The Tour du Valat hosts the MedWet Secretariat.

1984

2000s

2014



1974

The Tour du Valat Foundation (now the Pro Valat Foundation), which funds the research, was created as a Swiss legal entity. This legal and administrative transformation was accompanied by a reorientation of the programmes.

1986

The first management plan for a Natural Reserve in France was established by the Tour du Valat.

2005

Governance and internal organisation were reformed. The Research, Conservation, and Estate teams were integrated in a single programme.



1954 - 2014

1991

The MedWet Initiative was launched, and Tour du Valat expertise on wetlands management was exported throughout the Mediterranean Basin. New transfer and training skills were acquired by our teams.

2008

1845 ha of the Tour du Valat estate were listed as a Regional Natural Reserve.



Réserve Naturelle Régionale TOUR DU VALAT

1980s

The knowledge acquired by the different research programmes, in various disciplines, contributed to the development of multi-disciplinary wetlands conservation tools.



Closing session at the Grado Conference



Wetlands conservation, a major

THE MOST PRODUCTIVE ECOSYSTEMS ON THE PLANET,

- 25% of the primary production of terrestrial ecosystems on only 6.4% of the terrestrial surface area.
- They provide invaluable services to society (45% of all ecological services assessed at the present time), in particular thanks to their extraordinary biological productivity, but also because they play a role in terms of hydrological regulation and climate change mitigation.



© WWF Grece

- Their decline has been accompanied by a decrease in their capacity to deliver services to the local community.
- The principal causes of their degradation are land conversion (urban development, agriculture), water abstraction (mainly for agriculture), and bad practices (over-exploitation of resources and too many visitors).

© Jean Roché



YET THERE ARE SOLUTIONS!

- The number of sites designated under the Ramsar Convention has increased twice as fast in the Mediterranean region as in the rest of the world.
- Thanks to the various protective measures adopted, some biodiversity compartments are better off than 20 years ago;
- Many initiatives show that new partnerships between development and conservation stakeholders are fruitful and provide sustainable solutions.

BUT THE MOST DESTROYED !

- They have decreased in number and area. 50% of their total surface area has disappeared since the beginning of the 20th century.
- In the Mediterranean Basin, their current surface area is estimated to be between 15 and 22 million hectares,
- 1/4 of these wetlands are artificial (dams, salt pans, rice fields...)



issue for society



The Ramsar Convention: the only international treaty for one kind of ecosystem

The first call to establish an international convention on wetlands was made in 1962, in the Camargue, at the closing conference of the MAR project (MARécages; MARshes, MARismas, i.e. "marshes" in French, English and Spanish). It was proposed by Luc Hoffmann and the Tour du Valat, and was the first international initiative that objectively defined the scientific basis for the mass disappearance of wetland areas. After nine years of negotiations, the Convention, which was the first international environmental treaty, was adopted at the seaside resort of Ramsar, on the coast of the Caspian Sea. This convention promotes the conservation and wise use of wetlands through local and national measures, as well as international cooperation. It has now been signed by 168 contracting parties, and 2182 sites covering over 208 million hectares are listed as wetlands of international importance.

www.ramsar.org



The MedWet Initiative - implementing the principles of the Ramsar Convention in the Mediterranean world



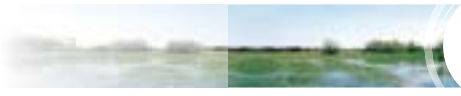
In 1991, nearly 30 years after the MAR project, the Grado Conference revealed that the loss of wetlands was continuing and worsening in the Mediterranean Basin. The final declaration at the conference was a call for all supranational organisations, Mediterranean governments, and NGOs to take action to halt the loss and degradation of wetlands and restore them. The MedWet Initiative was born.

Today, it brings together 27 countries from throughout the Mediterranean basin, three international conventions, and the European Commission, as well as international NGOs, and various scientific and technical organisations. Its purpose is to ensure that Ramsar Convention principles are applied throughout the Mediterranean world, where it is the most significant regional initiative. It has served to devise a Mediterranean strategy, and develop and implement numerous projects for strengthening institutions, adapting legal frameworks, developing national wetlands strategies, creating and disseminating methods and tools for sustainable management, training stakeholders, and raising the awareness of decision makers. The Tour du Valat was one of the architects of the MedWet Initiative and continues to play a key role in it today, on its steering committees, and also by coordinating the Mediterranean Wetlands Observatory, and hosting the MedWet Secretariat.

www.medwet.org



© Hervé Hôte



The Tour du Valat :

At the beginning of the 1950s, as the recently created International Union for the Conservation of Nature (IUCN) was building its programme aimed at monitoring the health of the world environment, it became obvious that wetlands had been largely forgotten. Yet no biome had been destroyed as much, and wetlands were disappearing at an alarming rate, whereas scientists had not yet had the time to investigate their functions and importance for humanity. In 1954, Luc Hoffmann founded the Station Biologique de la Tour du Valat in response to this situation.



• The laboratory and its aviary in 1954

Today, the Tour du Valat is an atypical organisation, which is the fruit of an unlikely alchemy stemming from the passion of one man. A man who was able to share his humanistic vision of nature conservation, and devoted his energy, power to persuade, and personal fortune to that end. A man who shared his commitment with his family and convinced many people to follow him, moved by the same desire to understand and share knowledge about wetlands so they remain full of biodiversity and highly productive for human beings.

But how can we sum up the Tour du Valat's six decades of achievements?

The following pages will attempt to do just that by focusing on six key notions on which its actions have been based:

Knowledge, Management, Participation, Interconnections, Transfer, Dissemination.



• Le Provençal, 15 September 1954

Originally a bird ringing station, it rapidly evolved in function of the important questions and increasing complexity involved in providing pertinent answers, to become a research centre focusing on the ecology and conservation of Mediterranean Basin wetlands.



• Courtyard of the Tour du Valat farmhouse

a place with a unique alchemy



Luc Hoffmann

An emblematic figure because of his knowledge and will to defend nature, Luc Hoffmann is an extraordinary scientist and philanthropist, who has instigated many initiatives to protect nature, and wetlands and waterbirds in particular. While the Tour du Valat is often considered to be his major contribution, his work has gone well beyond the scope of that institution. Some of his most remarkable achievements include the idea to establish such a far reaching treaty as the Ramsar Convention, the fundamental role he played in major nature conservation NGOs such as WWF, IUCN, and Wetlands International. Not to forget his involvement in the protection of emblematic areas, including the Coto Doñana in Andalusia (Spain), one of the most beautiful wetlands in Europe, the Neusiedler See on the Austria-Hungarian border, Hortobágy in the Hungarian puszta region, as well as the Prespa Lakes at the crossroads of Greece, Albania, and Macedonia. In 1985, he founded the Banc d'Arguin International Foundation to support the Banc d'Arguin National Park in Mauritania, then by widening the scope of its activities, he provided decisive sup-

port for the Regional Marine and Coastal Conservation Programme for West Africa (PRCM). He must also be credited for the role he played in saving the Przewalski horse and helping reintroduce it in Mongolia in 2004.

In 1994, he founded the MAVA Foundation for Nature, which supports many nature conservation projects, and establishes solid partnerships aiming to preserve biodiversity in the Mediterranean Basin, on the west coast of Africa, and in the Alps.



© Jean Jalbert



Knowledge

Keys for understanding a complex and changing world

© Photothèque Tour du Valat



Under the instigation of Luc Hoffmann, the driving force behind Tour du Valat activities has always been the eagerness to discover and understand - to pierce the secrets of migratory birds, explore the relationships between living organisms, decipher how wetlands function, understand the mechanisms behind their exceptional productivity, analyse the relationships we have with them, and so much more.

LONG-TERM MONITORING THE TOUR DU VALAT'S SCIENTIFIC CAPITAL

From 1950 to 1970, the principal activity at the Tour du Valat was the capturing and marking of birds. Hundreds of thousands of birds were captured, ringed and released, and in some cases re-captured, sometimes thousands of kilometres from the Camargue. These data enabled scientists to better understand the movements of these species and their ecologies, as well as the key roles played by wetlands in terms of their flyways and as sites for breeding and wintering.

12



Hundreds of thousands of birds ringed

Before organising its activities around the major research projects that have established its reputation (Greater flamingoes, Herons, and so on), the Tour du Valat was one of the most active bird ringing sites in Europe. In 1958, bird-ringing activities at the Tour du Valat and the Camargue National Reserve were united to create the Camargue bird ringing station. The 1975 annual report written by Alan Johnson states that the station had already ringed some 350,000 birds at that time. With nearly 60,000 ringed individuals, the Common Teal was by far the most highly represented species. In comparison, at the beginning of the 20th century only 85,000 Common Teal were ringed throughout the entire United Kingdom,

© Photothèque Tour du Valat



© Photothèque Tour du Valat



© Photothèque Tour du Valat

Name des Beobachters: *Jacky Lepenne*
 Nom de l'observateur: *Hubert Kwisso*
 ART ESPECE: *Pica pica (Camargue flammaris)*
 Jahr 19 *67*

Standort des Nests: *Veas Roudes Vans*
 Lieu où le nid a été trouvé: *Veas Roudes Vans*

Zahl der Eier resp. Jungen (oder „B“ im Nest) bei jeder Kontrolle:
 Nombre d'œufs ou de jeunes (ou „C“ construction) à chaque contr.

Date	Zeit	Eier	Junge	Notizen	Meter S. Nest	Kanton
Date	Heure	Œufs	Jeunes	Date	M. à. m. m.	Canton
<i>23-Mai</i>	<i>11</i>		<i>1</i>	<i>Camargue flammaris</i>		
				<i>de gorge</i>		
<i>26 Mai</i>	<i>14</i>		<i>1</i>	<i>de gorge avec</i>		
				<i>(Kiste J. Geniel</i>		
				<i>+ de 15 jours</i>		
<i>2 Juin</i>	<i>15</i>			<i>nest vide!</i>		

Weitere Beobachtungen auf Rückseite eintragen
 De plus autres observations sont à noter au dos de la carte

STANDORT DES NESTES
 EMPLACEMENT DU NID: *Deas Grou nans*

HÖHE ÜBER DEM BODEN
 HAUTEUR DU NID PAR RAPPORT AU SOL: *1.30*

BIOTOP
 BIOTOPE

Diese Rubrik bitte nicht ausfüllen
 Ne pas remplir

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© Photothèque Tour du Valat

and 22,000 in Denmark. The Tour du Valat's contribution to these operations was very important. By the 1960's these data permitted to have a better estimation of Anatidae populations and understand their migratory movements. However, they are not only of "historical" interest: the quality of the data is so good that they continue to be used. The analysis of these data with modern tools continues to improve our knowledge, particularly in terms of Common Teal population dynamics, with several scientific publications produced every year.

Matthieu Guillemain

ONCFS / CNERA migratory avifauna programme



Greater flamingoes, herons, ducks, passerines, and eels, as well as terrapins, marble trout and Dalmatian pelicans are all species that have been monitored scientifically for 20, 30, or even more than 50 years in the Camargue, the Balkans, and sometimes throughout the Mediterranean Basin.

Today, these hundreds of thousands of data items gathered for decades using the same scientific protocol represent an invaluable capital and a unique database, enabling exceptional analysis to be made. The Tour du Valat is one of the rare scientific organisations in the world to have such a complete and robust data series over such a long period of time. Researchers at the Tour du Valat, CNRS, universities, and ONCFS exploit these data to understand how populations of these species are changing because of various pressures linked to global changes and to model their future trajectory in function of management measures that could be implemented.

Databases have been developed to manage this huge amount of data, some of which have been exported to several Mediterranean counties and all the way to Mexico.



© Hellio & Van Ingen



Praise for the long-term studies

© Photothèque Tour du Valat



Ecological research is regularly confronted by the same dilemma: should we continue investing in the current projects or would it be better to investigate new lines of research or focus on new species that have been inadequately or not at all studied? The answer is neither simple nor

immediate, but definitely requires us to reflect on the added value of long-term studies, conducted within a long timeframe, beyond the few years ordinarily needed to resolve a well-delimited issue. In ecology, "long term" often means more than the length of the career of a researcher, given the importance of assessing the complex phenomena influencing the functioning of ecosystems in the broadest possible temporal and spatial context. To abandon a historical approach in favour of the short term would be equivalent to putting one's faith in a fictitious present, with the risk of drawing hasty or even wrong conclusions.

The long-term research programmes conducted at the Tour du Valat are broad in terms of both space and time. A long timeframe is particularly necessary when we do research on long-lived species like Greater Flamingo. How indeed can we study the population dynamics of an entire species that takes more than a decade to reach its reproductive state? How can we assess in these same species the impact of rare but wide-ranging events, such as a cold wave, which only occur once every ten or twenty years? Generally speaking, and for most plant and animal populations, particularly those that are small in size, only long-term data enables us to

study complex but essential data such as density-dependent regulation or demographic and environmental stochasticity.

In addition to extending the timeframe of a research programme, its spatial coverage must also be extended. The value and originality of Tour du Valat programmes stem from our respect for this double imperative. As they cover the scales of both the Camargue and the Mediterranean Basin, they enable our researchers to assess the importance of local conditions, and to take account of interlocking levels of perception - from a plot to an entire landscape - and to better understand how populations are organised in space and time. For example, our research on the European Pond Terrapin, a species with a high natural heritage value, compares the demographic functioning of spatially isolated populations, but which may be connected genetically due to an influx of migrants.

Finally, our will to maintain ambitious, long-term research and monitoring programmes is continually rewarded by the valorisation of the data collected, as the techniques for analysing them improve. Whether simple observations or DNA samples, the data gathered, and well preserved and managed, will be used by several successive generations of researchers, who will exploit them based on the latest theoretical advances. For beyond their intrinsic scientific value, long-term studies are also and especially a common thread, a formidable intergenerational link uniting the extended family of the Tour du Valat.

Frank Cezilly

Professor at the University of Burgandy

UNDERSTANDING, MODELLING, AND SUSTAINABLY MANAGING ECOSYSTEMS

In the 1990s, the Tour du Valat programme launched the interdisciplinary study of certain vulnerable habitats or ones for which the stakes were high in the Mediterranean Basin. The list included threatened wetlands that were disappearing with total indifference, such as temporary pools, and also naturally exploited habitats, such as reed beds and lagoons, as well as artificial wetlands like rice fields, which have an ecological value that varies in function of rice-growing practices.

Today, our approach focuses more on conservation and management issues than on the types of ecosystems. In this approach, the modelling of ecosystem dynamics is an important area of research, which takes account of the interactions between their physical, biological, and social components. The use of modelling to improve our knowledge enables forward-looking analyses, which use an anticipative model to compare the outcomes of different management methods and restore degraded ecosystems.

© Photothèque Tour du Valat



• Temporary pools



© Photothèque Tour du Valat

"MULTI-STAKEHOLDER RESEARCH" AT THE INTERFACE OF DIFFERENT DISCIPLINES

The Tour du Valat's specificity is its ability to conduct scientific research that

feeds on the daily practices and knowledge of professional and non-professional users and managers of wetlands. Moving beyond the traditional distinction between "fundamental" and "applied" research, the Tour du Valat conducts and promotes "multi-stakeholder" research, which aims to create a dialogue between professional researchers, wetlands users, and decision makers to find solutions for environmental problems and promote the wise use of wetlands.

Given the complex relations and wide range of situations, there is no simple and unique solution, rather numerous responses that must be formulated at the fertile interface between many disciplines, at the crossroads between natural and human sciences. Conservation sciences are developing, transdisciplinary dialogue is taking place, and joint responses are being formulated.

Since its founding, the Tour du Valat has always positioned itself at this interface, in this fertile crescent, of interdisciplinary dialogue.

“ **Ecologie végétale, Ornithology, Aquatic Macrofauna, Hydrology, Geomatics, Socio-economy, Geography and Integrated Management...** ”



Health ecology an emerging issue at the crossroads of different disciplines

As recent crises (avian flu and SARS) have reminded us, the health of human beings is closely linked to that of wildlife. Wetlands are a place of contact between wildlife, domestic animals, vectors and human being, and as such constitute areas in which the exchange of pathogenic agents is greatly facilitated. The Camargue, a mosaic of wetlands located at the crossroads of bird flyways and human trade routes, is thus an area where infectious diseases may emerge. It is therefore essential to obtain adequate knowledge of the dynamics of infectious diseases within these ecosystems to be able to devise conservation measures that can preserve the health of this wildlife and of human beings.

Conscious of the issues linked to this situation, the Tour du Valat has been conducting studies on the ecology of emerging pathogenic agents since 2003. This work is based on collaboration between Tour du Valat ecologists and outside teams of parasitologists, as well as doctors

and veterinarians. It has enabled us to show that influenza A viruses (avian flu agents) and West Nile viruses circulate regularly in wild avifauna in the Camargue.

Among our current projects, a broad-based multidisciplinary study is being set up with a view to better understanding the role of wildlife in the dynamics of anti-biotic-resistant bacteria. Conducted in collaboration with the CNRS/IRD/MIVEGEC multidisciplinary research centre and the Montpellier University Hospital, it illustrates the need to bring together ecologists, biologists, and doctors to work on issues relating to health ecology. The study sites range from preserved natural areas to wastewater treatment plants and residential areas, and the project is based on our collaboration with the owners and/or managers of these sites. It is a good example of the current partnerships involving Tour du Valat research teams and local stakeholders.



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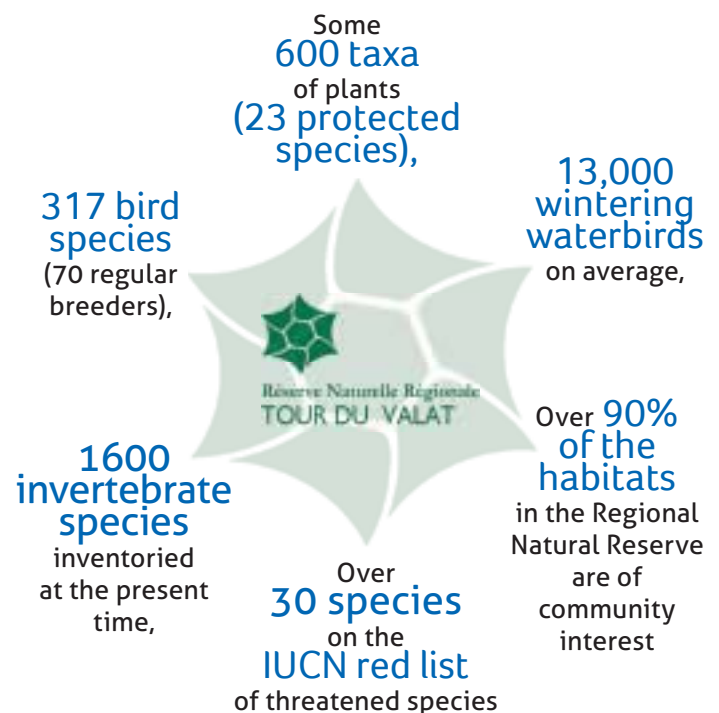


Management

Wetlands full of biodiversity that provide so much to women and men

The knowledge we accumulated, and our understanding of the functions and values of wetlands, rapidly revealed that they were in a very poor condition, and were degrading and disappearing for many reasons. This knowledge had to be mobilised to take action, to maintain these habitats in functional condition able to support biodiversity and provide sustainable resources and services to human beings.

The Tour du Valat was the first natural reserve in France to create a management plan (1986), and one of the pioneers in natural area management. Since then, it has experimented, tested, and innovated, and is today internationally recognised for its expertise that is used in various ways.



THE TOUR DU VALAT ESTATE

The Tour du Valat is first of all a magnificent estate in the heart of the Camargue, covering nearly 2600 hectares (1845 of which are a Regional Natural Reserve), where there is a mosaic of natural habitats characteristic of the Camargue, particularly rare and threatened habitats like temporary ponds and fossil dunes,⁽¹⁾ as well as vast expanses of sansouires⁽²⁾.

The management of the Estate is defined in a 5-year management plan, which focuses on three areas:

- 1 CONSERVATION OF THE EXCEPTIONALLY RICH NATURAL HERITAGE**, based on light management principles that take account of the site's high level of naturalness. Natural heritage monitoring and inventories are conducted on a regular basis, including the cartography of vegetation, floristic surveys, water-bird surveys, and mammal censuses. 640 hectares of marshes are managed with the use of hydrological infrastructure to ensure the optimal conditions for expressing biodiversity.



*1 : In the Camargue, a slightly elevated piece of land colonised by dry grassland vegetation.
**2 : Lowlands colonised by vegetation resistant to salt and flooding, principally *Salicornia*.

2 IMPLEMENTATION OF RESEARCH PROGRAMMES, that offer a site for fieldwork where Tour du Valat scientists and colleagues from partner organisations can test out and experiment with various approaches aiming to maintain biodiversity, optimise management practices, combat undesirable species, and restore degraded habitats.

3 MAINTAINING AND ADAPTING TRADITIONAL ACTIVITIES, so that economic and nature conservation activities can be reconciled. We test out innovative methodologies and establish protocols that can be transferred to other stakeholders.

Extensive grazing: the Tour du Valat Estate has a herd of 70 hoeses and 450 "bulls", 250 of which belong to the Tour du Valat ranch, and are raised in accordance with organic farming and Protected Designation of Origin (PDO) "Camargue Bull" standards. Research is conducted on grazing pressure management, and herd husbandry zootechnical questions in search of an innovative approach that can be transferred to other livestock breeders. For example, aware of the impact of avermectins on coprophagous insects, which affects the entire food chain, the Tour du Valat forbid the use of antiparasite products 10 years ago. Subsequent monitoring has demonstrated that this biodiversity-friendly measure does not affect the health conditions of the herd and enables substantial savings to be made.

Hunting: an age-old practice on the Estate, innovative regulations have been adopted to govern hunting activity. Likewise, after studies conducted by the ONCFS on lead poisoning among ducks, traditional lead-shot ammunition were forbidden in 1994 and replaced by alternative ammunition with steel or tungsten shot. On the basis of this experimentation, a law was adopted in 2006 forbidding the use of lead shot in wetlands. Hunting is forbidden for some species with an unfavourable conservation status. Very precise game registers are kept (number of outings and bag limits) so as to provide accurate statistical data that can be used for our scientific studies.

Agriculture: about sixty hectares are used for organic farming with rice, wheat, alfalfa, and hay grown in rotation, in the aim of demonstrating the environmental interest and economic viability of such crop systems in a protected area, where the damage caused by wildlife (wild boars and flamingoes) is very limited.



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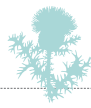
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© Hervé Hôte

© Hervé Hôte

© Damien Cohez



The Petit Saint Jean Estate toward an agroecology pilot site

The Tour du Valat took over the Petit Saint-Jean Estate in the Camargue in 2012, which it had inherited through a donation thirty years earlier. Covering 101 ha, this property is made up of farmland (26 ha including a 0.7 ha vineyard), saline grassland, and freshwater wetlands (25 ha), as well as a remarkable pine forest (50 ha).

Given the potential of this remarkable site, a conservation management demo project is being developed, based on agroecology and agroforestry principles, which rely on the synergistic effects of the agricultural

system and natural habitats.

Our ambition is to develop a partnership-based project that will cover all of the Estate, with a farming system that respects the environment and fosters biodiversity. Local stakeholders - farmers, elected officials, and the Gard Federation for the Camargue - as well as agroecology experts work in association with this project so that it is well integrated into the local area and to ensure that it is innovative, viable, and transferable.

- Ploughing the vineyard using a draught horse



© Photothèque Tour du Valat

MANAGEMENT EXPERTISE DEPLOYED IN THE CAMARGUE AND IN THE MEDITERRANEAN BASIN

Based on its experience on its own estate, the Tour du Valat has contributed to developments in natural area management planning methodologies in France and Europe.

On the basis of this methodological expertise, as well as its knowledge of the Camargue and the Mediterranean Basin, it offers support services to many stakeholders, such as administrations, NGOs, and private landowners to draw up and implement management plans for wetlands where there are specific issues: French Coastal Protection Agency sites, fragile natural areas in the Bouches-du-Rhône Department, as well as natural areas belonging to Arcelor-Mittal and the Great Marseille Sea Port. It also works for the Göksu Delta in Turkey, the Merja Zerga Lagoon in Morocco, Lake Reghaïa in Algeria, and the Karavasta Lagoon in Albania.





Lagoons and marshes in the Camargue salt works area adaptive management for an exceptional and rapidly-changing site



In 2008, the French Coastal Protection Agency started acquiring a vast tract of land from the Salins Group, which today covers more than 6700 hectares in the southern part of the Camargue. It is made up of former lagoons that in the 1960s were transformed into salt pans for salt farming.

This site is exceptional in terms of its ecology and natural beauty, and it also has a high symbolic value, with a great deal of social unrest in response to the current uncertain economic situation in the village of Salin-de-Giraud.

Finally, it is an area where the coastline is rapidly changing, with significant erosion in the south and buildup in the west.

In this context, site management was entrusted to the Camargue Regional Natural Park, in partnership with the National Nature Protection Society and the Tour du Valat. The initiative to be developed goes well beyond the usual issues involved in the management of a protected wetland. The aim is to understand the ecological functioning of this rapidly-changing site, and at the same time generate the information needed for an ecological restoration project on a scale never before seen in France, while

providing possibilities to make new discoveries and gradually diversify the economy in this area. With the end of the hydrological management of the salt works, reconnecting this site to the sea and the central Vaccarès lagoon is an important issue for ensuring that water continues to circulate and biological exchanges. The coastal ecosystems must also be restored based on adaptive management practices for the rising sea level, with a managed and progressive retreat from the coast in the areas where there is erosion.

For the Tour du Valat, the joint management of this site represents a major opportunity to experiment with and implement on a real-life scale, and via robust scientific methods, adaptive management methods that ensure the resilience of ecosystems and respond to the consequences of climate changes as well as societal demands. This new approach must be built upon so that its ecological restoration methods can be transferred to others in the aim of recovering Mediterranean wetlands.



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© Helio & Van Ingen

© Helio & Van Ingen

Family Album



First family outings

© Photothèque Tour du Valat



Max Muller, the Tour du Valat's first employee

© Photothèque Tour du Valat



1956 / Pierre Aguesse and Louis Bigot in the cold snap

© Photothèque Tour du Valat



1959 / Mr Hoffmann gets ringing

© Photothèque Tour du Valat



In front of the lab in 1969, David Roughton, John Walmsley, Alan Johnson (with his eccentric dog), Heinz Hafner and Nick Riddiford

© Photothèque Tour du Valat



1973 / Yes, there used to be a school at the Tour du Valat!

© Photothèque Tour du Valat



1970s / René Lambert and Alan Johnson on horseback

© Photothèque Tour du Valat



1979 / Trip to the lower Alps: Jean-Paul Jaris, Erik Carp, Mike Moser, Alan Johnson and Claire Hosbey

© Photothèque Tour du Valat



1989 / IWRB (International Waterfowl Research Bureau) meeting, Astrakhan Russia

© Photothèque Tour du Valat



1994 / Tour du Valat 40th anniversary celebration

© Photothèque Tour du Valat

2005 / Teamwork to combat Halmifolia with Laurent Deshouhes, Damien Cohez, Anthony Olivier, Loic Willm, Nicolas Beck, Emilien Duborper and Nicole Yaverkovski



© Photothèque Tour du Valat



Trainees, 2008 vintage

© Hervé Hôte

© Hervé Hôte



2008 / The Tourenq and Rogers families accompanied by Jean-Laurent Lucchesi and John Walmsley

© Hervé Hôte



2011 / Ramsar celebrates its 40th anniversary

© Hervé Hôte



2012 / There you go youngsters! By Patrick Grillas, Yves Kayser and Jean Jalbert

© Photothèque Tour du Valat



2013 / Team visit to the Petit St Jean Estate

© Hello & Van Ingen



© Photothèque Tour du Valat



2013 / Luc Hoffmann's 90th birthday celebration

© Jean Roché



© Hervé Hôte



Two generations gathered at the Tour du Valat

© Photothèque Tour du Valat



2013 / The mid-term assessment team

© Photothèque Tour du Valat



Incognito

© Photothèque Tour du Valat



Our Advisory Board

© Photothèque Tour du Valat



Participation

A stakeholder committed to the local territory



© Photothèque Tour du Valat

• Luc Hoffmann giving a cheque to President G. Pompidou for the acquisition of the Camargue National Reserve by the French government

As soon as he arrived in the Camargue, in addition to studying wetlands, Luc Hoffmann endeavoured to develop good relationships with the men and women who make this territory what it is the most influential as well as the humblest.

He got involved in various initiatives relating to the management of the area, contributing financially to the acquisition of the Camargue National Reserve by the French government in 1972, so that the iconic site would be protected forever.

He participated actively in the creation of the Camargue Regional Natural Park (PNRC), which became reality in 1970, and was on its Advisory Board until 1996, when he was succeeded by Jean-Paul Taris. The Tour du Valat has always worked actively with the PNRC, participating in its various management bodies, actively contributing to drafting its successive charters (a veritable contract between Camargue inhabitants for their territory), and co-managing the vast former salt works area with the teams of the PNRC and the Camargue Reserve.

Today, the Tour du Valat employs 70 people, with nearly 100 working on its site if we count its partners, which include the International Foundation for the Banc d'Arguin, the Takh Association for the protection of Przewalski's horse, the Limosa Association, a branch of the French Hunting and Wildlife Agency, and very recently, the MedWet Initiative Secretariat.



© Photothèque Tour du Valat

As the biggest employer in the Camargue, the Tour du Valat is not only an environmental stakeholder, it is also an important economic and social actor in this territory. It develops, tests, and transfers new methods for energy renovation in old buildings, based on renewable energies and the reuse of agricultural waste from the Camargue. It allows everyone, and in particular the inhabitants of the nearby village, to use part of its estate for a joint management project of this territory.





The Verdier Marshes co-management and multiple uses with inhabitants



In 2003, the Tour du Valat purchased 120 ha of the former Verdier fish farm, adjacent to the land it already owned near the village of Le Sambuc. Inhabitants were given the chance to closely participate in the management of this new wetlands area, within the framework of the development of various activities respecting the environmental challenges of restoring of this site.

In addition to the conservation and valorisation of this area, which had been inaccessible, the overall aim was to provide local inhabitants with a new place where they could organise educational activities, while offering new possibilities for exploiting the resources there (grazing areas, fish, and waterfowl). Site management has been entrusted to the Verdier Marshes Association, which puts the Tour du Valat and the inhabitants of Le Sambuc at the heart of decision-making and practical activities. Taking into consideration what the villagers wanted, associating them with the scientific monitoring, and encouraging multiple uses of this area through traditional activities, have enabled this natural area to be sustainably managed by its users in a constructive team spirit. This project has revitalised the village, making it possible to create true social relationships, explain things, and move beyond certain land-use conflicts.

Bernard Picon, a sociologist specialising in the Camargue, describes the project in the following terms: "At the very time many managers are recommending, without much success, the multiple use of natural or protected areas, an experiment, perhaps limited in space, but very convincing, is being run in the hamlet of Le Sambuc [...] The 50 members of the users' association have succeeded in setting things up so that grazing, reed farming, hunting, fishing, and hiking can be done at the same time with good relations. This is no small exploit in the Camargue, where land is generally managed by a single owner-user. The Verdier Marshes Association offers proof that the multiple use of an area is possible if we trust the self-organising capacities of communities with 'interknowledge'" (L'espace and le temps en Camargue - Space and time in the Camargue, 2008 in French).

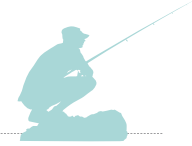


23



The Tour du Valat participates in the main organisations that manage this area, whether run by local authorities or civil society. In this role, it advocates for making the land-use planning tools mobilised in the Camargue compatible with the dominant function of this territory, which public authorities wanted to be a green buffer zone between the industrial complex in Fos and the touristic

complex in Languedoc-Roussillon. It makes meaningful propositions promoting approaches that can reconcile the protection of biodiversity with the satisfaction of human aspirations, such as mosquito control without the use of insecticides, raising cattle on pasture with no use of antiparasites, organic rice farming, and sustainable hunting.



Mosquito control in the Camargue: How can we reconcile social demands with the conservation of biodiversity?

While the fight against mosquitos has been waged for more than 50 years on the French Mediterranean coast, it is much more recent in the Camargue. Experimental mosquito control with Bti, a selective bio-insecticide that is not very toxic, was started in 2006 in the Salin-de-Giraud and Port Saint-Louis sectors by the coastal Mediterranean mosquito control coalition, on the initiative of the Bouches du Rhône Department. At the same time, independent scientific and sociological monitoring was conducted to assess the unintentional impacts of this mosquito abatement on biodiversity, and how its effects were perceived by people living in the area concerned. This monitoring has been conducted by several research teams, and supervised for a few years by the Tour du Valat. The results are conclusive: a significant and rapid impact was observed with a cascade effect on the entire food chain - dragonflies, spiders, passerines, and so on - the base of which is mosquitos and their non-biting cousins, chironomids, which are also destroyed by Bti. Nevertheless, given the social demand, public authorities are not planning on stopping this mosquito control. The solution is to change strategies. Rather than killing mosquito larvae in natural areas, which affects the entire biocenosis, we should let them hatch and protect the inhabited ar-



eas against adult mosquitos. Odourless propane traps, which are clean and silent, and emit no more CO₂ than a human being at rest, can be installed around villages, and incorporated into street furniture. The advantage of these traps is that they control the nuisance where it is an issue without affecting the natural functioning of ecosystems. They are also less expensive for local governments than Bti spraying. Finally, contrary to mosquito control with Bti, which only targets two species of mosquitos, these traps work effectively for all kinds of biting insects and particularly the tiger mosquito, which represents a health risk and is especially found in inhabited areas. Prototypes are currently being tested out, and will soon be deployed in Le Sambuc.

- Non-target fauna (spiders, martins, dragonflies) studied for the Bti mosquito control impact assessment.



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© Photothèque Tour du Valat

© Kate Lessels

Ocellated lizard

Timon lepidus



Interconnections

Fostering partnerships the cornerstone of our actions



The Tour du Valat has set itself an ambitious mission, which corresponds to today's challenges, but is beyond its own capacities if it acts alone: "Stop the degradation of Mediterranean wetlands and their natural resources, while restoring them and promoting their wise use".

Based on pragmatism as well as a profound conviction, all actions are conducted via partnerships with research centres, NGOs, and governmental or supra-governmental organisations.

26

BUILDING A SCIENTIFIC PLATFORM FOR TAKING ACTION

In 1953, a partnership was established with the French National Research Centre (CNRS), which assigns young researchers to work at the Tour du Valat. Throughout the years, this partnership has developed and been diversified, and

today it covers fields ranging from the demographic analysis of species to research on anti-biotic-resistant bacteria in wildlife.

Numerous scientific partnerships have been developed with universities and research centres like the Doñana Biological Station in Andalusia, a "sister" institution. All these cooperative projects have a common objective, which is to understand how wetlands

function, and the population dynamics therein, so appropriate management measures can be adopted.



© Photothèque Tour du Valat

A network of scientists and ornithologists working together to save the Greater Flamingo

As soon as he arrived in the Camargue, in 1947, Luc Hoffmann took an interest for the Greater flamingo, a fragile and vulnerable species. He observed that this species only bred on a few sites in the Mediterranean Basin, and at the end of the 1960s was threatened to such an extent that it might stop nesting in the Camargue. Given this situation, the Tour du Valat, in collaboration with the Salins du Midi salt company, built an artificial islet that would enable flamingoes to continue breeding in the Rhone delta. Thanks to these facilities, the population of Greater flamingoes in the Camargue has increased and spread to other Mediterranean sites. Since then, first under the leadership of Alan Johnson and today Arnaud Béchet, nearly 29,000 flamingo chicks hatched in the Camargue have been ringed, which enables them to be identified and individually monitored. And others have copied our approach! More than ten scientific and management partnerships have been launched in Spain, Italy, Mauritania, Algeria, Mo-

rocco, Turkey, and Iran with support from Tour du Valat ornithologists. Sites are managed in a way that offers the right conditions for flamingo breeding. Young flamingos are regularly marked in Spain, Italy, Turkey, and Algeria. Today, an active network of amateur and professional ornithologists share their experiences and data, making it possible to reconstitute the movements and important phases in the lives of each flamingo that has been tagged. Thanks to this unique database, with over 700,000 pieces of data, we now have a better understanding of the biology of this species, its demography, and migration and dispersal strategies to the different colonies in the Mediterranean Basin, so that together we can adopt the appropriate conservation. Finally, more recently, new scientific partnerships have enabled us to analyse gene flows within the distribution area of this species, and to conduct studies on the personalities of individual hatchlings.

© Photothèque Tour du Valat



• Alan Johnson, the legendary "Mr Flamingo"



© Heltio & Van Ingen

FOSTERING DIALOGUE BETWEEN WETLAND STAKEHOLDERS

The knowledge created through these scientific partnerships must be shared, compared to local knowledge, and mobilised so that action can be taken by wetland managers and users. The Tour du Valat plays such a "go-between" role, fostering on-going dialogue between scientists, wetland users, various professionals, policy makers, and citizens.



© Hervé Hôte

• Jean Jalbert talking with Ramsar France site managers



The Mediterranean Lagoons Transfer Unit a bridge between lagoon stakeholders



At the end of the first French national action plan for wetlands (1995-2000), a lack of communication between the central and local levels was highlighted, as well as a lack of involvement by local stakeholders, site managers, policy makers, and scientists. Five Wetland Transfer Units were created in 2001 to address these problems, each of which is dedicated to a specific type of wetland.

by the Tour du Valat, in partnership with Languedoc-Roussillon Natural Area Conservatory and the Corsican Environmental Office, to be as close as possible to lagoon stakeholders along the entire Mediterranean coast.

To meet its objectives, the Lagoons Transfer Unit has developed various tools including an Internet site, which features a bibliographic database and a directory of stakeholders. It publishes an electronic newsletter on the latest lagoon issues. It organises concertation for questions of interest to all stakeholders, informs elected officials about the latest wetland inventories, organises training for site managers on issues for which they have expressed a need. Finally, the Lagoons Transfer Unit coordinates activities for World Wetlands Day and European Heritage Days, key annual events to raise public awareness, which attract a large number of visitors to the coastal wetlands.

www.pole-lagunes.org



© Pôle-lagunes

• Field trip

The challenge was to share knowledge and good practices, foster and mentor local initiatives, facilitate a network of exchange, and raise the awareness of all stakeholders concerned, to improve the image of these areas and manage them sustainably.

The system set up is innovative because of its overarching methodology, according to which current stakeholders are not replaced but linked with each other. The Mediterranean Lagoons Transfer Unit is coordinated



© Pôle-lagunes

• European Pond Terrapin training course

FACILITATING MEDITERRANEAN COOPERATION

International agreements such as the Ramsar Convention and its MedWet Mediterranean initiative, as well as the African-Eurasian Waterbird Agreement (AEWA), are essential frameworks for organising and developing cooperation between governmental stakeholders, and also with civil society. Indeed, by means these mechanisms, the Tour du Valat was able to develop and conduct various international projects within MedWet, which were funded by bi- or multi-lateral donor agencies, as well as by sponsors like the MAVA Foundation, the Prince Albert II of Monaco Foundation, and the TOTAL Foundation. In partnership with the French Ministry of Ecology, the ONCFS, and the Senegal National Park Department, it facilitates and supervises the AEWA's African Initiative Technical Support Unit, which aims to provide support to African countries for the implementation of this plan of action.



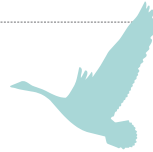
• Participants at the 1st regional workshop for improving monitoring in North Africa (Lake of Tunis, Tunisia)



A Mediterranean initiative for sharing waterbird data

International waterbird censuses, which are facilitated by Wetlands International, contribute to evaluating trends in these populations and the conservation status of wetlands throughout the world. Because most of the bird species concerned are migratory, regional and international coordination are necessary. However, in the Mediterranean Basin, the effort to collect data is highly variable so a large portion of the existing data is neither shared nor put to good use.

The Tour du Valat, ONCFS, and Wetlands International started this support programme with assistance from the French Ministry of the Ecology and the MAVA Foundation to improve the spatial coverage and the quality of water-



bird monitoring in the Mediterranean, strengthen national networks of observers, and ensure the processing and sharing of the data collected. Numerous actions were conducted during the initial phase (2012-2014), and a real regional initiative was launched.

Thanks to its technical expertise, the Tour du Valat helps teach North African ornithologists how to conduct waterbird censuses and analyse the monitoring data collected. A new Mediterranean Waterbirds network was created to improve knowledge sharing between partners with different perspectives (NGOs, administrations, and universities). It is facilitated via a collaborative on-line platform: medwaterbirds.net



• Waterbird counts on Wadi El Rayan Lake (Egypt)



Transfer

Mobilising knowledge for the wise use of wetlands

All this accumulated knowledge and feedback makes no sense if it is not shared and mobilised for action, to kindle new vocations.

FOSTERING THE SCIENTISTS OF TOMORROW

The Tour du Valat has always received young scientists for internships as part of their degree course or to carry out a doctoral thesis in partnership with their home university. This has enabled many young researchers from various European and Mediterranean Basin countries, after spending a few years with the Tour du Valat teams, to return to their home country PhD in hand and develop new, recognised expertise, creating new resource centres and transfers of action for wetlands.

Finally, every two years in collaboration with CNRS/CEFE and the Mediterranean Institute of Biodiversity and Ecology, the Tour du Valat organises a conference for young researchers in conservation sciences, a key opportunity for exchange and sharing between young scientists and experienced researchers from around the Mediterranean Basin.



BUILDING THE CAPACITIES OF WETLAND STAKEHOLDERS

As early as 1992, in the framework of the European project that led up to the MedWet Initiative, the Tour du Valat started to develop its expertise in training provision. Faced with the fact that there was no initial formation or continuing training provided anywhere in the Mediterranean Basin on the understanding and management of wetlands, it was decided that training modules should be developed on key subject areas such as management plans and scientific monitoring, adaptable to local contexts and implementable by people without major expertise in either training or wetlands. Guidelines and training modules, tools that have been very widely used, adapted and translated into several Mediterranean languages, building the capacities of several hundred people, whether wetland managers, public authority agents or volunteers.

- Delegation of elected officials from the Gediz Delta (Turkey) visiting Camargue





- Brochures from the "Sciences and gestion" (Science and Management) collection



But above and beyond producing tools, it is necessary to provide human support and methodological expertise for integrated management initiatives. That is the sense of the close and long-lasting partnership with the Society for the Protection of Prespa, in Greece, catalyst for the trans-boundary cooperation for the conservation of the Prespa lakes, natural treasures at the borders between Greece, Albania and Macedonia. That is also the motive behind the action that has already been underway in the Gediz Delta, near the Turkish megalopolis of Izmir, where the Tour du Valat, in partnership with the Provence-Alpes-Côte d'Azur Region, assists local stakeholders - State services, local authorities, civil society - and provides them with methodological, scientific and technique support.

FEEDING INTO PUBLIC POLICIES

But transfer is not only scientific or technical. It also needs to target decision-making in order to feed into public action in favour of wetlands.

To this end the Tour du Valat mobilises knowledge to influence policy-making at various scales, for example by contributing to the structuring of the Provence-Alpes-Côte d'Azur Regional Biodiversity Observatory or the French National Action Plan for wetlands. We are also one of the initiators of the Mediterranean Wetlands Observatory.

Also in the framework of MedWet, the Tour du Valat capitalised on its research to promote its results in a collection of 13 non-specialist works for wetland managers. Also in the framework of MedWet, we publish the Sciences and Gestion (Science and Management) series of small brochures providing feedback on experience regarding precise issues such as the management of rejected plants in grazing, multiple uses of a marsh, ecology and management of the European Eel.

Finally, we have developed more elaborate tools for simulating the effects of management decisions. A multi-agent model coupled with role play enables various wetland stakeholders, such as farmers, hunters and managers of natural areas, to compare and contrast their needs and visualise the benefits of the concertation process. Another simulation tool, available on the Internet, was recently developed by the Tour du Valat to visualise the impact of management decisions on the evolution of marsh water and salinity levels under different climatic conditions. Using a time step of one month, the tool calculates the water volumes required to achieve a desired water level and enables users to visualise the impact on submerged or emergent vegetation and on some groups of marsh breeding birds (www.mar-o-sel.net, in French).



- Signing of the Ramsar France charter in the presence of Nathalie Kosciusko-Morizet, French Minister of Ecology, Sustainable Development, and Energy, Anada Tiéga, Secretary General of the Ramsar Convention and Hervé Schiavetti for the President of the Ramsar France association.



The Mediterranean Wetlands Observatory, a Scientific-Political platform for mobilising public action

Despite decades of research and field actions, the knowledge and data available concerning the status of Mediterranean wetlands, their localisation, the multiple functions they perform, and the services that they provide to humanity, remain fragmentary. And even when the data exist, they are generally not centralised or even accessible.

Yet such information, concrete and shared, is required for influencing and orienting public action.

On that basis, in 2008 the MedWet Initiative, acting on a proposal by the Tour du Valat, decided to create the Mediterranean Wetlands Observatory (MWO). Mainly targeted at decision-makers, its objective is to improve the conservation and management of wetlands by:

- providing quality information on the status and trends of Mediterranean wetlands;
- identifying the threats they face and the measures required for promoting their conservation, wise use and restoration;
- assessing the level of consideration paid to wetlands in the context of sustainable development in the Mediterranean.



Steered by the Tour du Valat, which catalyses a broad-based technical and scientific partnership, it analyses 25 summary indicators, devised together with representatives of Mediterranean countries, to build a framework for action, influencing and orienting public policies, and finally assessing the impact of those policies.

A first summary report was published in 2012, followed by two special reports on the evolution of biodiversity and the evolution of land cover.

www.medwetlands-obs.org



Great Reed Warbler
Acrocephalus arundinaceus



Dissemination

A network open to the world

A FAMILY ADVENTURE...



The Tour du Valat, above and beyond its goal and scientific activities, is above all a human adventure. The adventure of one man, Luc Hoffmann, in love with nature, bewitched by the Camargue, who has devoted his life, his energy, his force of persuasion and his fortune to reconciling people with nature. And also the adventure of his family. Daria his wife, who came to join Luc straight after their wedding in 1953, in the middle of the marshes, without running water or electricity, ever present, attentive to each and everybody in the growing Tour du Valat community. Then their children Vera, André, Maja and Daschenka, who grew up at the Tour du Valat, and started their schooling at the Tour du Valat school, with the children of the ranchers and employees. Highly committed to the Camargue and Arles, and more broadly to prolonging Luc's humanistic vision, they have become major figures in philanthropic action for the environment, culture and the open combination of approaches. Today, Luc and Daria's grandchildren are entering active life, ready to write the new pages of the adventure.



Some made their career at the Tour du Valat, others built on the experience acquired at the Tour du Valat to continue their professional journey elsewhere. Many of these "Tourduvaliens" went on to take up major responsibilities in the key nature conservation organisations such as International Union for Nature Conservation (IUCN), WWF, Wetlands International, Ramsar Convention Secretariat, United Nations Programme for the Environment, and Conservation International. Others continued a high-level scientific career at university or in the CNRS (French national scientific research centre). Some even occupied eminent political functions. Finally, others changed their professional orientation, but remain unswervingly attached to the Tour du Valat and Luc Hoffmann's vision. All these personal journeys linked together by a unique experience.

GOING BEYOND THE CAMARGUE



Initially focused on the Camargue, the Tour du Valat rapidly broadened its scope of action. Missions were organised in North Africa and as far away as Central Asia, enabling a better understanding of the distribution and ecology of species, and also the diversity of situations and pressures faced wetlands. Progressively, the Tour du Valat's range extended to the whole Mediterranean Basin and the shores of West Africa, and its influence, through the intercession of Luc Hoffmann's visionary connivance and generosity, proved decisive in the creation of organisations such as the Ramsar Convention on wetlands of international importance, WWF, the International Waterfowl & Wetlands Research Bureau (now Wetlands International), the International Foundation for the Banc d'Arguin in Mauritania, and the Society for the Protection of Prespa, in Greece. Each time, above and beyond the institutions, it is men and women who share the same values, the same vision, who weave the links of a community of action.



... JOINING FORCES

Over the years, the family adventure gradually became a joint adventure, shared right from the 1950s by a handful of enthusiasts: Max Müller, Pierre Aguesse, Louis Bigot, André Rivoire, Raymond Lévêque, Pierre Heurteaux, Jacques Blondel ... then Hubert Kowalski, Alan Johnson, Heinz Hafner, John Walmsley, Jean-Noël Tourenq, Paul Isenmann ...

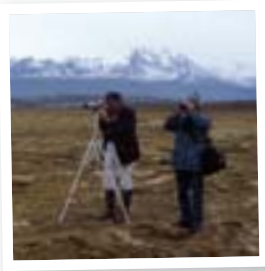
During the 1960s, hundreds of people crossed Luc Hoffmann's path and followed in his footsteps, for several months or several decades. Sometimes a whole lifetime. For many of them their experience at the Tour du Valat was decisive, a foundation of their professional career, and also for many, a key step that would structure their life, their personal path.





That community, active in the Camargue, the Mediterranean Basin and beyond, is the heritage of the Tour du Valat, witness to the constancy and relevance of its actions. It is also extraordinary potential, a major asset for its development and influence, for transfer, for increased and better mobilising wetland stakeholders.

The association "Les amis de la Tour du Valat" was created for that reason, keeping the links active between former and current employees, and also with those men and women who share the Tour du Valat's values and sense of action.



Testimonies



For those who, like me, have known the Tour du Valat since the origins of the Station biologique, or nearly, the journey travelled could be described in a thousand ways. The researcher that I am, who took his first steps by doing a doctoral thesis here, will describe it by citing

the networks of interactions that have been weaved between people, places, institutions and ideas, because there is no science without exchanges with and openings on others and the world. The number and quality of these networks, together with the web of personal relations spun all over the world, are undoubtedly one of the Tour du Valat's greatest successes because they create scientific fertility. How many times, inside and outside our frontiers, have I heard people evoke with emotion and admiration the memory of time spent at the Station or the building of an amicable collaboration. The thing that I retain above all the long years that I've been frequenting it, apart from the emotional aspect which conditions and flows into the rest, is that the improbable isolation of this place, almost paradoxically, has projected it onto a thousand stages elsewhere. Naming the men and women involved would run the risk of making the list excessively long or, on the contrary, too short. It would also need pages to mention all the institutional relationships between the Tour du Valat and French or foreign research and conservation institutions. But in the autumn of my academic career, I can only observe that if something useful for science and conservation has been achieved, and I think it to be the case, we owe it to the fact that an indefinable alchemy has always enabled those networks of interactions to express themselves here and this family to remain welcoming and open. I have felt at home at the Tour du Valat. It is in that sense that this place is really magical.

Jacques Blondel

Emeritus Research Director CNRS / CEFÉ, France



I remember the first time I came to Tour du Valat; it was close to the end of my masters degree, and I was invited there to discuss a possible PhD position on flamingoes in Turkey. I did not know then how this

meeting was going to change my life entirely. At that stage I was just amazed to find out that the institute buildings seemed to have their own spirit.

Once my PhD grant was confirmed, I started to both study and live in Tour du Valat; interacting with employees, students and interns like myself. I was a part of the flamingo team, but was also very warmly welcomed by the whole team of Tour du Valat. I must say that my time in Tour du Valat does not only remain as the best years of my life, but also that I am still actively using what I have learned in those years in my professional life. The most important teaching for me there was to observe how cutting edge scientific research and applied on the ground conservation action can meet under the same roof. This has become a major component of my life, and I am still working towards this for the conservation of nature in Turkey.

I hereby would like to thank the flamingo team and everybody else for their support. I hope the links with Turkey and France will continue for another 60 years in the future and young students will continue to feel themselves at home in Tour du Valat, like I did.

Özge Balkiz

*Species Conservation Programme Coordinator
Nature Conservation Centre, Turkey*



I left Tour du Valat in 1998, after spending about five years in Camargue. Strange enough, now in 2014, I still feel as my departure was just yesterday. Was it due to spectacular bird richness, white horses and black bulls, wetlands' landscape, seasonal colours of Salicornia, the best library on

birds and wetlands, good food, friendship memories or Provençal accent?

I guess it is a bit of all and everything. Tour du Valat was my home for those five years and it seems to me as it was a very important part of my life.

I had the chance enjoying working there with several teams of excellent professionals that left a huge mark in my career as ornithologist researcher at Tirana University, as wetlands expert involved in conservation projects in Albania and in my position as a former vice-Minister of Environment in Albania.

I remember also leaving Tour du Valat with no regrets as I knew that all those friends and colleagues would always be near to me, either working again together or writing to each-other.

I was right. And today, I still have the greatest pleasure working with Tour du Valat.

Taulant Bino

*Dean, Faculty of Planning, Environment and Urban Management
Polis University, Tirana, Albania*



I arrived speaking no French and with my own project to design and run. This was challenging, and I especially remember the help and support of Patrick Duncan, the then scientific director.

In those 4 years I did a lot of work on lead poisoning in birds, including running an IWRB workshop in Brussels. While supervising a group of enthusiastic students from Edinburgh University, I was involved in some fascinating work on sexual selection in damselflies. It was also a productive period for scientific publications. The ethos was to work hard and play hard. This included long lunch breaks with unlimited red wine followed by siestas and then work into the evening. Very unlike the UK and ideal for someone in their mid-20s! My time at Tour du Valat helped to develop my self-reliance. I learnt to speak French (after making some very amusing mistakes!), ride Camargue horses, made some good friends and fell in love with the French countryside. It's a magical place and I have fond memories.

Deborah Pain

*Director of Conservation
Wildfowl & Wetlands Trust (WWT), United Kingdom*



And the future?

Human activity in the last century and a half has changed the course of the future: climate change and its multiple consequences, the sixth species extinction crisis ... We have now fully entered the Anthropocene, the new geological era where one single species - Homo sapiens - has become the main geophysical force governing the evolution of the planet, upsetting fundamental equilibria, triggering highly kinetic phenomena that are beyond its capabilities and out of its control.

The Mediterranean Basin, an exceptional biodiversity hotspot, is not unaffected by this trend, and even seems subject to a concentration of pressures; it is one of the regions of the world with the greatest economic, political and social tensions, the highest pressures on water and natural resources, and where the ecological footprint is the biggest.

In this context, the conservation of nature - a recent preoccupation long considered the province of dreamers or the privileged few - has now become a fundamental issue for our societies. Over the years, we have realised that wetlands are the most bountiful ecosystem on the planet, the one that contributes the most to the development and well-being of humanity. We now know that wetlands, far from being in competition for rare and coveted water, are an indispensable component of the sustainable management of water resources.

In the face of the magnitude of the challenges, the Tour du Valat's contribution may seem modest, certainly, but it is determined and guided by a pressing need for efficiency. It endeavours to optimise its impact through an original approach: a specialised field - the wetlands of the Mediterranean Basin -, but diverse action methods, mobilising a vast range of activities going from high-quality research to operational management and supporting public policies.

On the occasion of this 60th anniversary review, it appears that the Tour du Valat's heritage is its principal asset for tackling the challenges of the future. Over the course of those 60 years, it has been able to evolve, adapt, anticipate changes, while unceasingly building solid foundations, mainly based on three layers of bedrock:

- its expertise, both specialised and operational, continually tested against realities in the field and internationally recognised,
- its aptitude to situate its actions in the long term, considerably increasing its capacity to analyse environmental changes and consequently to find appropriate responses,
- its ability to transmit, catalyse, synergise people and organisations around a common issue.

On the strength of these assets and the energy of the men and women who make the Tour du Valat, our commitment is more than ever to study, understand, exchange, test, dialogue, and act together for wetlands, continuing to be a source of life, wealth and inspiration.

André Hoffmann

*President of the
Pro Valat Foundation*

Jean-Paul Taris

*President of the
Tour du Valat Foundation*





A research centre for the conservation
of mediterranean wetlands

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