

Symposium on THE REPRODUCTIVE PHYSIOLOGY OF FISH

19 - 21 September 1977

Paimpont, France

Ref :

18 August 1977

Dear Dr.

Thank you for your registration. You will be lodged according to your wish at the :

Paimpont Biology Station
35380 Plelan le Grand
Tel : (99) 09.80.32

or
The Hotel Broceliande
35380 Paimpont
Tel : (99) 09.80.03

Meals will be served at the Paimpont Station.

The Symposium will be held on September 19, 20 and 21 and the visit to a fish farm and the Brittany Oceanographic Center at Brest will take place on September 22.

Transportation between the train station at Rennes and the Paimpont Biology Station (a distance of 45 km) will be assured for trains from Paris arriving at Rennes at 5:50 and 9:47 p.m. Enclosed please find a train time-table.

People arriving at the Charles de Gaulle airport of Roissy should take a bus to the "Maillot" terminal in Paris. There they can take the underground going to "Vincennes" and get off at the stop "Charles de Gaulle-Etoile". They must change trains at that stop and take one going to "Nation". The Montparnasse train station is the 11th stop. (see enclosed map).

Enclosed also please find a list of the abstracts we have received; their authors have confirmed participation.

I wish to remind you that the manuscripts should not exceed 5 typewritten pages, including tables and figures. They should be handed in on the day of the Symposium. The directions for authors are also enclosed here.

Registration fees should be paid on arrival (150 FF; 200 FF should be added if you wish to participate in the visits on September 22).

Wishing you a good trip and looking forward to seeing you, I remain,

Sincerely yours,

R. BILLARD



SYMPOSIUM ON THE REPRODUCTIVE PHYSIOLOGY OF FISH

Tentative Programme

I9.9 - SESSION I : PITUITARY GONADOTROPIN - Drs. FOLLETT, et BRETON

9H20 - 9H40 : B. EKENGREN, J. PEUTE
9H40 - 10H : M. OLIVEREAU
10H - 10H20 : J.P. SUMPTER
10H20 - 10H40: Break
10H40 - 11H : B. BRETON
11H - 11H20 : E. FONTAINE
11H20 - 11H40: E. TAN
11H40 - 12H : E. BURZAWA-GERARD
12H - 12H20 : M.P. SCHREIBMAN
12H20 - 12H40: Discussion
12H40 - 14H : Lunch

SESSION 2 : C.N.S HYPOTHALAMO-HYPOPHYSIS AXIS FEEDBACK Drs. PETER
DUBOIS

14H - 14H20 : B. EKENGREN, M. TERLOU
14H20 - 14H40 : H.J.T. GOOS
14H40 - 15H : M. DUBOIS
15H - 15H20 : M. TERLOU
15H20 - 15H40 : L. DEMSKI
15H40 - 16H : Break
16H - 16H20 : P. CHAMBOLLE
16H20 - 16H40 : C. WEIL
16H40 - 17H : E.R. PETER
17H - 17H20 : R. BILLARD
17H20 - 17H40 : Discussion

20.9 - SESSION 3 - GONADS : CYTOLOGY ULTRASTRUCTURE - SEXUAL DIFFERENTIATION

Drs. SZÖLLÖSI, HOAR

8H40 - 9H00 : R. VAN DEN HURK

9H - 9H20 : W.S. HOAR

9H20 - 9H40 : D. SZÖLLÖSI

9H40 - 10H : S. BRUSLE

10H - 10H20 : Break

10H20 - 10H40 : C. LEBRUN

10H40 - 11H : Y. ZOHAR

11H - 11H20 : Discussion

SESSION 4 - SEXUAL CYCLE - ENDOCRINOLOGY - OOCYTE MATURATION

Drs. VAN OORDT, JALABERT

11H20 - 11H40 : J. PEUTE

11H40 - 12H : M. MALO-MICHELE

12H - 12H20 : Dr. HTUN-HAN

12H20 - 12H40 : K. BIENIARZ

12H40 - 14H : Lunch

14H - 14H20 : J.G.D. LAMBERT

14H20 - 14H40 : A. FOSTIER

14H40 - 15H : P. EPLER

15H - 15H20 : B. JALABERT

15H20 - 15H40 : G. De MONTALEMBERT

15H40 - 16H : Break

16H - 16H20 : C. KUO

16H20 - 16H40 : M. SOKOLOWSKA

16H40 - 17H : Discussion

SESSION 5 : VITELLOGENESIS - Drs. YARON, CAMPBELL

17H - 17H20 : L.W. CRIM

17H20 - 17H40 : A. TERKATIN-SHIMONY

17H40 - 18H : B. BORCHARD

18H - 18H20 : C.M. CAMPBELL

18H20 - 18H40 : B.I. SUNDARARAJ

18H40 - 19H : S.N. UPADHYAY

19H - 19H20 : Discussion

21.9. SESSION 6 - ENVIRONMENTAL FACTORS - Drs. MATTY, GIRIN

8H40 - 9H : D.W. MacQUARRIE
9H - 9H20 : C. WHITEHEAD
9H20 - 9H40 : C. GILLET
9H40 - 10H : R.C. MAY
10H - 10H20 : Break
10H20 - 10H40 : M. GIRIN
10H40 - 11H : Dr. HTUN-HAN
11H - 11H20 : V. DE VLAMING
11H20 - 11H40 : V. BYE
11H40 - 12H : J.H. PRIMAVERA
12H - 12H20 : Discussion
12H20 - 13H40 : Lunch

SESSION 7 - AQUACULTURE : - GAMETES PRESERVATION Drs. KUO, ZELL
- INDUCED SPAWNING

13H40 - 14H : P. CARPENTIER
14H - 14H20 : J. STOB
14H20 - 14H40 : H. STEIN
14H40 - 15H : S.R. ZELL
15H - 15H20 : I.A. BARANNIKOVA
15H20 - 15H40 : H. CHAUDHURI
15H40 - 16H : Break
16H - 16H20 : E.M. DONALDSON
16H20 - 16H40 : H. GORDIN
16H40 - 17H : A.M. RAMOS
17H - 17H20 : L.M. LAIRD
17H20 - 17H40 : Discussion

SYMPOSIUM SUR LA PHYSIOLOGIE DE LA REPRODUCTION DES POISSONS

P R O G R A M M E
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LUNDI 19 SEPTEMBRE 1977

7H30-8H30 : Petit déjeuner

9H -9H05 : Accueil des participants par Monsieur le Président de l'Université de Rennes et Présentation du Symposium par Monsieur le Directeur Général de l'Institut National de la Recherche Agronomique

9H05-9H10 : Introduction Générale par Monsieur le Professeur FOLLETT

SESSION I - PITUITARY GONADOTROPIN Président Pr. FOLLETT
Co-Président :Dr. BRETON

9H10-9H30 : B. EKENGREN, J. PEUTE, G. FRIDGERG : The distribution and the nature of the gonadotropic cells in the rostral pars distalis of the Atlantic salmon Salmo salar

9H30-9H50 : M. OLIVEREAU : Gonadotrophs in salmonid fish.

9H50-10H10 : J.P. SUMPSTER, B.K. FOLLETT, J.M. DODD : Purification of gonadotropin from the dogfish (Scyliorhinus canicula L)

10H10-10H30 : B. BRETON, P. PRUNET, P. REINAUD : Sexual differences in fish gonadotropins.

10H30-10H50 : R. SALESSE : Spectroscopic studies of the interaction between the subunits of salmon gonadotropins

10H50-11H10 : Pause café

11H10-11H30 : E. FONTAINE : Effet d'hormones gonadotropes, in vitro sur la concentration de l'adénosine monophosphate cyclique dans l'ovaire de l'Anguille (Anguilla anguilla L.) argentée

11H30-11H50 : E. TAN, J.M. DODD : Immunological relatedness of gonadotropins of various fishes as shown by radioimmunoassays

11H50-12H10 : E. BURZAWA-GERARD, B. KERDELHUE, Y.A. FONTAINE : Etude par radioimmunologie des propriétés des immunserums de l'hormone gonadotrope de la Carpe (c-GTH) et de ses sous-unités (SU I et SU II).

12H10-12H30 : M.P. SCHREIBMAN : The genetic control of pituitary gland development, gonad maturation and body size in a teleost Xiphophorus maculatus (the Platyfish).

12H30-12H50 : Discussion

13.00-14.00 : Repas.

SESSION 2 - C.N.S. HYPOTHALAMIC-HYPOPHYSIS AXIS FEEDBACK

Président : Dr. PETER, Co-Président : Dr. BILLARD

14H -14H20 : B. EKENGREN, M. TERLOU : Hypothalamic centers and innervation of the hypophysis in the Atlantic salmon (Salmo salar) and the rainbow trout (Salmo gairdneri).

14H20-14H40 : H.J. VAN GOOS, O. MURATHIAHOGLU, P.G.W.J. GORST : Localization of gonadotropin releasing hormone (GRH) in the forebrain and neurohypophysis of the trout (Salmo gairdneri)

14H40-15H : M.P. DUBOIS, R. BILLARD, B. BRETON : Localization of the somatostatin like antigen in the trout : comparative repartition of neurophysin and LH-RH.

15H -15H20 : M. TERLOU, J.P. DE JONG, P.G.W.J. GORST : Scanning-cytophotometry, a useful means in the study on the amount of neurosecretory material in the preoptic nucleus of the trout, Salmo gairdneri.

15H20-15H40 : L. DEFSKI : Neuroanatomical substrates of reproductive behavior in male Sunfish (Genus Lepomis).

15H40-16H : Thé

16H -16H20 : P. CHAMBOULE, O. KAH, H. OLIVIEREAU : Hypothalamic control of gonadotropic function in Gambusia sp. (teleost fish) with a grafted pituitary.

16H20-16H40 : C. WEIL, R. BILLARD, B. BRETON, S. JALLABERT : Pituitary responsiveness to LH-RH at different stages of gonatogenesis in the rainbow trout (Salmo gairdneri)

16H40-17H : R.E. PETER : Hypothalamic lesions of goldfish : Effects on gonadal activity and gonadotropin secretion.

17H -17H20 : R. BILLARD : Testicular feed back on the hypothalamo-hypophyseal system in rainbow trout (Salmo gairdneri)

17H20-17H40 : Discussion

HARDI 20 SEPTEMBRE 1977

SESSION 3 - GONADS : CYTOLOGY ULTRASTRUCTURE - SEXUAL DIFFERENTIATION
Président : Dr. SZÖLLÖSI, Co-Président : Dr. HOAR

- 7H30- 8H30 : petit déjeuner
- 8H40- 9H00 : R. VAN DEN BURK, J.A.A. VERMEIJ, J. STEGENGA, J. PEUTE, P.G.W.J. VAN OORDT : Cyclical changes in the testis and vas deferens of the rainbow trout (Salmo gairdneri) with special reference to the sites of steroidogenesis.
- 9H00- 9H20 : W.S. HOAR : The cellular sources of the sex steroids in teleost gonads.
- 9H20- 9H40 : D. SZÖLLÖSI, B. JALABERT, B. BRETON : The post-ovulatory fate of the Theca ovarii of the trout.
- 9H40-10H00 : S. BRUSLE, J. BRUSLE : An ultrastructural study of early sex differentiation in Mugil (Liza) auratus Risso 1810 (Teleost, Mugilidae).
- 10H00-10H20 : C. LEBRUN : Sexual differentiation of gonads in the rainbow trout (Salmo gairdneri)
- 10H20-10H40 : Y. ZOHAR, M. ABRAHAM, H. GORDIN : The gonadal cycle of Sparus aurata (L.), a protandrous hermaphroditic teleost.
- 10H40-11H00 : Discussion
- 11H00-11H20 : Pause café.

SESSION 4 - SEXUAL CYCLE - ENDOCRINOLOGY - OOCYTE MATURATION

Président : Dr. VAN OORDT, Co-Président Dr. JALABERT

- 11H20-11H40 : J. PEUTE, H.J.Th. GOOS, P.G.W.J. VAN OORDT : Ultrastructure and hormone content of the gonadotropic cells of the rainbow trout pituitary during the annual cycle.
- 11H40-12H00 : M. HALO-MICHIELE : Cytological data on the evolution of the gonadotropin of the Box, Boops salpa L. (Teleost fish, Sparidae), particularly during the spermatogenesis.
- 12H00-12H20 : K. BIENIARZ, P. EPLER, B. BRETON, L.H. THUY : Changes in the oocytes and blood gonadotropin level in the sexually mature female carp.
- 12H20-12H40 : J.G.D. LAHSERT, G.I.C.G.M. BOSMAN, R. VAN DEN HURK, P.G.W.J. VAN OORDT : Annual cycles of plasma oestradiol-17 β in the female rainbow trout, Salmo gairdneri.
- 13H00-14H00 : Repas

14H00-14H20 : A. FOSTIER : Sexual hormones levels at the end of the reproductive cycle in trout.
14H20-14H40 : P. EPLER : Study of the influence of gonadotropic and steroid hormones on the maturation and ovulation of carp oocytes in vitro.

14H40-15H00 : B. JALABERT, B. BRETON, A. FOSTIER : Problems with the precocious induction of maturation and ovulation in rainbow trout.

15H00-15H20 : G. De MONTALEMBERT, B. JALABERT, C. BRY : Problems with the precocious induction of maturation and ovulation in Esox lucius.

15H20-15H40 : Thé

15H40-16H00 : C. KUO, W. WATANABE : Circadian rhythm of responsiveness of mature oocytes to gonadotropins and prostaglandins in Grey Mullet, Mugil cephalus L.

16H00-16H20 : M. SOKOLOWSKA, W. POPEK, K. BIENIARZ : The influence of intrahypophysial injections of synthetic LH-FSH-RH on the maturation of carp females.

16H20-16H40 : Discussion.

SESSION 5 - VITELLOGENESIS
Président : Dr. YARON,
Co-Président : Dr. CAMPBELL

- 16H40-17H00 : L.W. CRIM, D.R. IDLER : Plasma gonadotropin, Estradiol and vitellogenins and gonadotropin levels in relation to the seasonal reproductive cycles of female brown trout.
- 17H00-17H20 : A. TERKATIN-SHILMONY, Z. YARON, Y. SHANAM, H. SALZER : Estradiol-17 β in the cichlid fish, Tilapia aurea.
- 17H20-17H40 : B. BOKCHARD : Correlation between maturity of gonads and serumproteins in rainbow trout (Salmo gairdneri).
- 17H40-18H00 : C.M. CAMPBELL : In vitro stimulation of vitellogenin incorporation into "previtellogenic" oocytes by salmon pituitary extracts.
- 18H00-18H20 : B.I. SUNDARARAJ, P. NATH : Induction of vitellogenesis in catfish, Heteropneustes fossilis (Bloch) : Effects of steroids and protein hormones.
- 18H20-18H40 : S.N. UPADHYAY, B. BRETON, R. BILLARD : Ultrastructural studies on the experimentally induced vitellogenesis in juvenile rainbow trout (Salmo gairdneri R.)
- 18H40-19H00 : Discussion
- 19H30 : Repas et Soirée Bretonne.

MERCREDI 21 SEPTEMBRE 1977

SESSION 6 - ENVIRONMENTAL FACTORS Président : Dr. MATTY,
Co-Président : Dr. GIRIN

- 7H30- 8H30 : Petit déjeuner
- 8H40- 9H00 : D.W. MACQUARRIE, J.R. MARKERT, W.E. VANSTONE : Photoperiod induced off-season spawning of coho salmon (Oncorhynchus kisutch).
- 9H00- 9H20 : C. WHITEHEAD, N. BROMAGE, J. FORSTER, A.J. MATTY : The effects of alterations in photoperiod on the processes of maturation and spawning of the rainbow trout (Salmo gairdneri).
- 9H20- 9H40 : C. GILLET : Effects of photoperiod and temperature on reproduction in goldfish (Carassius auratus).
- 9H40-10H00 : M. GIRIN, N. DEVAUCHELLE : Déplacement de la saison de ponte naturelle en captivité par modification des cycles photopériodiques et thermiques, chez deux poissons marins le Bar (Dicentrarchus labrax) et le Turbot (Scophthalmus maximus).
- 10H00-10H20 : Pause café.
- 10H20-10H40 : M. HTUN HAN, V.J. BYE : Photoperiod manipulations of maturation in dab and turbot.
- 10H40-11H00 : ~~V. DE WAMING, W. COOM : The role of the pineal in the reproductive response to photoperiod in cyprinid fishes.~~
- 11H00-11H20 : V.J. BYE : Functions of the pineal organ in the cod.
- 11H20-11H40 : J.H. PRIMAVERA, E. BORLONGAN : Notes on ovarian rematuration of ablated supgo prawn Penaeus monodon Fabricius.
- 11H40-12H00 : Discussion
- 12H00-13H00 : Repas
- SESSION 7 - AQUACULTURE : -GAMETES PRESERVATION Président Dr. KUO
-INDUCED SPawning Co-Président Dr. ZELL
- 13H00-13H40 : P. CARPENTIER : Short-term preservation of fish gametes
~~13H00-13H40 : R. SAVINIE ?~~
- 13H20-13H40 : J. STOB, S. BÜYÜKHATIPOGLU, W. HOLTZ : Short-term and cryopreservation of trout sperm.
- 13H40-14H00 : H. STEIN : Cryopreservation of the sperm of some freshwater teleosts.

- 14H00-14H20 : S.R. ZELL : Cryopreservation of gametes and embryos of Salmonid fishes.
- 14H20-14H40 : I.A. BARANNIKOVA : Peculiarities of hormonal regulation of reproduction in connection with fish culture.
- 14H40-15H00 : H. CHAUDHURI, J. JUARIOS : Use of hormone in breeding cultivated warm-water fishes with special reference to milkfish, Chanos chanos (Forsk.)
- 15H00-15H20 : Thé
- 15H20-15H40 : E.M. DONALDSON, H.M. DYE, B.F. WRIGHT : The effect of storage conditions on the biological activity of salmon gonadotropin.
- 15H40-16H00 : H. GORDIN, Y. ZOHAR : Induced spawning of Sparus aurata (L.) by means of hormonal treatments.
- 16H00-16H20 : M.A. RAMOS : Artificial reproduction in Alosa alosa L.
- 16H20-16H40 : L.M. LAIRD, A.E. ELLIS, A.R. NELSON, F.G.T. HOLLIDAY : The development of the gonadal and immune systems of the Atlantic salmon and a consideration of the possible consequence of their interaction.
- 16H40-17H00 : Discussion
- 17H00 : FIN DU SYMPOSIUM.
- 19H00 : Repas
- 20H30-21H00 : L'aquaculture en Bretagne par Yves HARGACHE

JEUDI 22 SEPTEMBRE 1977

EXCURSION EN BRETAGNE

- 7H30 : Départ
- 10H30-11H30 : Visite de la pisciculture Chevance à Poulleouen
- 13H00-14H00 : Repas au Centre Océanologique de Bretagne (CNEZO)
- 14H00-16H00 : Visite du C.O.B.
- 20H00 : Repas froid à Paimpont

VENDREDI 23 SEPTEMBRE 1977

- 7H00-7H30 : Petit déjeuner (rapide)
- 7H30 : Départ pour la gare de RENNES

Trains pour PARIS de 8H34

St MALO de 8H43

(Painpont, September 19 - 21)

LIST OF PARTICIPANTS

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- Dr. BARANKIKOVA I.A.
Physiological Institute
Leningrad University
LENINGRAD, 199164 U.S.S.R.
- Dr. BAYRLE
Technische Universität München
Abtlg. Zoologie und Parasitologie
805 - FREISING GERMANY
- Dr. BIEHARZ K.
Academy of Agriculture
Institute of Applied Zoology
Al. Mickiewicza 24/28
30-059 KRAKON POLGNE
- Dr. BILLARD R.
I.N.R.A.
Laboratoire de Physiologie des Poissons
78350 JOUY EN JOSAS FRANCE
- Dr. BLANCO CACHAFEIRO C.
Instituto Nacional para la Conservacion
de la Naturaleza
Subdireccion General de Recursos
Naturales Renovables
Gran Via de San Francisco
35 MADRID 5 ESPAGNE
- Dr. BORCHARD B.
Landesanstalt für Fischerei
Nordrhein-Westfalen
5942 KIRCHHARDEN 1 - ALBAUM GERMANY
- Dr. BOSMAN G.
Zoologisch laboratorium
Rijksuniversiteit Utrecht
Sektie Vergelijkende Endocrinologie
Padualaan 8
UTRECHT 2506 - N.L.
- Dr. BRETON B.
I.N.R.A.
Laboratoire de Physiologie des Poissons
78350 JOUY EN JOSAS FRANCE
- Dr. BOEUF
Centre National pour l'Exploitation
des Océans, C.O.B de Bretagne
B.P. 337
27293 BREST CEDEX
- Dr. BROMAGE N.R.
The University of Aston in Birmingham
Department of Biological Sciences
Gosta Green
BIRMINGHAM B4 7ET U.K.
- Dr. BRUSLE (Mme)
Département de Biologie animale
Centre universitaire
Avenue de Perpignan
66025 PERPIGNAN CEDEX FRANCE
- Dr. BRUSLE J.
Département de Biologie animale
Centre Universitaire
Avenue de Perpignan
66025 PERPIGNAN CEDEX FRANCE
- Dr. BRY C.
I.N.R.A.
Laboratoire de Physiologie des
Poissons,
78350 JOUY EN JOSAS, FRANCE
- Dr. BURZAWA GERARD E.
Muséum d'Histoire Naturelle
Laboratoire de Physiologie générale
et comparée
7, rue Cuvier
75007 PARIS FRANCE
- Dr. BYE V.
Ministry of Agriculture
Fisheries and Food
Fisheries Laboratory
LOWESTOFT, Suffolk NR 33 0HT U.K.
- Dr. CAMPBELL C.
Marine Sciences Research Laboratory
Memorial University of Newfoundland
ST JOHN'S, Newfoundland, CANADA
- Dr. CARPENTIER P.
I.N.R.A.
Laboratoire de Physiologie des
Poissons
78350 JOUY EN JOSAS, FRANCE
- Dr. COLOMBO L.
Istituto di biologia animale
Via Loredan 10
35100 PADOVA ITALY
- Dr. CARRILLO M.
Patronato "Juan de la Cierva"
Instituto de Investigaciones Pesqueras
Parco nacional
BARCELONA (3) ESPAGNE
- Dr. CHAMBOLLE P.
Laboratoire de Biologie animale A
Université de Bordeaux 1
Avenue des Facultés
33405 TALENCE CEDEX
- Dr. CHAUDHURI H.
Seafood Aquaculture Department
Suite 401 Kalyaan Building
De La Rosa Corner Salcedo Sts.
MAYATI PHILIPPINES
- Dr. CRIH L.W.
Marine Sciences Research Laboratory
Memorial University of Newfoundland
ST JOHN'S, Newfoundland, CANADA
- Mme DUBOIS
I.N.R.A.
Annales de Biologie animale, Biochimie
Siophysique
78350 JOUY EN JOSAS, France
- Dr. DUBOIS
I.N.R.A.
Centre de recherches de Tours
Laboratoire de Neuroendocrinologie
Rozilly
37350 BOURNAIE
- Dr. ELLIS
University of Aberdeen
Department of Zoology
Tillymore Avenue
ABERDEEN AB9 2TT U.K.
- Dr. EKENSTEN B.
University of Stockholm
Department of Zoology
Box 6001
S - 113 86 STOCKHOLM SWEDEN
- Dr. EPLER
Academy of Agriculture
Institute of Applied Zoology
Al. Mickiewicza 24/28
30-059 KRAKON POLAND
- Dr. FOLLETT B.K.
University College of North Wales
Department of Zoology
The Brambell Laboratories
BANGOR, Gwynedd LL57 2UW U.K.
- Dr. GAMSCH
University College of North Wales
Department of Zoology
The Brambell Laboratories
BANGOR, Gwynedd LL57 2UW U.K.
- Dr. GEMSKI L.
School of Biological Sciences
University of Kentucky
106 Morgan Bldg.
LEXINGTON, Kentucky 40506 U.S.A.
- Dr. GARRIGUE J.
Université P.M. Curie
Physiologie de la Reproduction
Batiment A, 6e étage
4, place Jussieu
75230 PARIS CEDEX 05
- Mme DEVAUCHELLE
Centre National pour l'Exploitation
des Océans - C.O.B.
B.P. 337
29273 BREST CEDEX FRANCE
- M. DEVAUX
I.N.R.A.
Laboratoire de Physiologie des Poissons
78350 JOUY EN JOSAS, FRANCE
- Dr. DONALDSON E.M.
Fisheries and Marine Service
4160 Marine Drive
WEST VANCOUVER, B.C. V7V 1V5 CANADA
- Mme DUBOIS
I.N.R.A.
Annales de Biologie animale, Biochimie
Siophysique
78350 JOUY EN JOSAS, France
- Dr. DUBOIS
I.N.R.A.
Centre de recherches de Tours
Laboratoire de Neuroendocrinologie
Rozilly
37350 BOURNAIE
- Dr. ELLIS
University of Aberdeen
Department of Zoology
Tillymore Avenue
ABERDEEN AB9 2TT U.K.
- Dr. EKENSTEN B.
University of Stockholm
Department of Zoology
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- Dr. EPLER
Academy of Agriculture
Institute of Applied Zoology
Al. Mickiewicza 24/28
30-059 KRAKON POLAND
- Dr. FOLLETT B.K.
University College of North Wales
Department of Zoology
The Brambell Laboratories
BANGOR, Gwynedd LL57 2UW U.K.
- Dr. GAMSCH
University College of North Wales
Department of Zoology
The Brambell Laboratories
BANGOR, Gwynedd LL57 2UW U.K.
- Dr. GEMSKI L.
School of Biological Sciences
University of Kentucky
106 Morgan Bldg.
LEXINGTON, Kentucky 40506 U.S.A.
- Dr. GARRIGUE J.
Université P.M. Curie
Physiologie de la Reproduction
Batiment A, 6e étage
4, place Jussieu
75230 PARIS CEDEX 05
- Mme DEVAUCHELLE
Centre National pour l'Exploitation
des Océans - C.O.B.
B.P. 337
29273 BREST CEDEX FRANCE
- M. DEVAUX
I.N.R.A.
Laboratoire de Physiologie des Poissons
78350 JOUY EN JOSAS, FRANCE
- Dr. DONALDSON E.M.
Fisheries and Marine Service
4160 Marine Drive
WEST VANCOUVER, B.C. V7V 1V5 CANADA
- Mme DUBOIS
I.N.R.A.
Annales de Biologie animale, Biochimie
Siophysique
78350 JOUY EN JOSAS, France
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I.N.R.A.
Centre de recherches de Tours
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Rozilly
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- Dr. ELLIS
University of Aberdeen
Department of Zoology
Tillymore Avenue
ABERDEEN AB9 2TT U.K.
- Dr. EKENSTEN B.
University of Stockholm
Department of Zoology
Box 6001
S - 113 86 STOCKHOLM SWEDEN
- Dr. EPLER
Academy of Agriculture
Institute of Applied Zoology
Al. Mickiewicza 24/28
30-059 KRAKON POLAND
- Dr. FOLLETT B.K.
University College of North Wales
Department of Zoology
The Brambell Laboratories
BANGOR, Gwynedd LL57 2UW U.K.
- Dr. GAMSCH
University College of North Wales
Department of Zoology
The Brambell Laboratories
BANGOR, Gwynedd LL57 2UW U.K.
- Dr. GEMSKI L.
School of Biological Sciences
University of Kentucky
106 Morgan Bldg.
LEXINGTON, Kentucky 40506 U.S.A.

- Dr. ECHAVARRIA Y.A.
Banco de Historia Natural
Laboratoire de Physiologie Générale
et Comparée
7 rue Cassini
75005 PARIS
- Dr. FOSTER A.
I.N.R.A.
Laboratoire de Physiologie des Poissons
78350 JOUY EN JOSAS FRANCE
- Dr. FRIDBERG
University of Stockholm
Department of Zoology
Box 6501
S - 113 86 STOCKHOLM SWEDEN
- M. FROES
Centre National pour l'Exploitation
des Océans - C.O.B. de Bretagne
B.P. 337
29273 BREST CEDEX FRANCE
- Dr. GHETT C.
I.N.R.A.
Laboratoire de Physiologie des
Poissons
78350 JOUY EN JOSAS FRANCE
- Dr. GIBERIN M.
Centre National pour l'Exploitation
des Océans - C.O.B. de Bretagne
B.P. 337
29273 BREST CEDEX FRANCE
- Dr. GIBBS H.J.Th.
Zoological Laboratory
Section for Comparative Endocrinology
Padualaan 8
UTRECHT, N.L.
- Dr. GORDAN
Israel Oceanographic et Limnological
Research Ltd., Mariculture Laboratory
P.O.B. 1212
ELAT ISRAEL
- Dr. GORCZKO
Station d'Oliwa
GDANSK POLOGNE
- Dr. GRITHI
University College of North Wales
Department of Zoology
The Brambell Laboratories
BANGOR, Bwyneod LL57 2UW U.K.
- Dr. HARACHE M.
Centre National pour l'Exploitation des
Océans, C.O.B. de Bretagne
B.P. 337
29273 BREST CEDEX FRANCE
- Melle HERTOUX F.
I.N.R.A.
Laboratoire de Physiologie des Poissons
35031 RENNES CEDEX FRANCE
- Melle HEYDORFF M.
I.N.R.A.
Laboratoire de Physiologie des Poissons
35031 RENNES CEDEX FRANCE
- Dr. HOAR W.S.
The University of British Columbia
2075 Westbrook Mall
VANCOUVER, B.C. V6T 1W5 CANADA
- Dr. HOLTZ W.
Institut für Tierzucht und Haustiergenetik
Der Universität Göttingen
34 GÜTTINGEN GERMANY
- Dr. HUIJ HAN
Ministry of Agriculture
Fisheries and Food
LONESTOF, Suffolk NR 33 0HT U.K.
- Dr. Van der HURK
Zoologisch Laboratorium
Sektie Vergelijkende Endocrinologie
Padualaan 8
UTRECHT 2506 N.L.
- Dr. JALABERT B.
I.N.R.A.
Laboratoire de Physiologie des Poissons
Université de Rennes-Beaulieu
B.P. 25A
35031 RENNES CEDEX FRANCE
- Dr. JIARITO J.
Seafood Aquaculture Department
Suite 401 Kalayan Building
De la Rosa Corner Salcedo Sts.
MAYATI, PHILIPPINES
- Dr. KAH O.
Laboratoire de Biologie animale A
Université de Bordeaux I
Avenue des Facultés
33405 TALENCE CEDEX FRANCE
- Dr. KOLOSSOVA
Physiological Institute
Leningrad University
LENINGRAD 199164 U.S.S.R
- Dr. KUO C.M.
The Oceanic Institute
Maikapu Point
KAIHAWALO, Hawaii 96795 U.S.A
- Dr. LAIRD L.M.
University of Aberdeen
Department of Zoology
Tillydrone Avenue
ABERDEEN, AB9 2TN U.K.
- Dr. LAMBERT J.G.D.
Zoologisch Laboratorium
Rijksuniversiteit Utrecht
Sektie Vergelijkende Endocrinologie
Padualaan 8
UTRECHT 2506 N.L.
- Dr. LECOMTE
I.N.R.A. C.N.R.A.
Département d'Hydrobiologie Continentale
Route de St Cyr
78000 VERSAILLES FRANCE
- Dr. LEDRUH C.
I.N.R.A.
Laboratoire de Physiologie des Poissons
78350 JOUY EN JOSAS, FRANCE
- M. LEMERCIER Ph.
Aqua-service
15, Montée des Pierres blanches
34200 SETE FRANCE
- Melle LEVASSEUR M.C.
I.N.R.A.
Station de Physiologie animale
78350 JOUY EN JOSAS FRANCE
- Dr. MACKAY W.C.
Department of Zoology
Biological Sciences Centre
The University of Alberta
EDMONTON, Alberta T6G 2E9 CANADA
- Dr. MACQUARRIE D.
Fisheries and Marine Service
4160 Marine Drive
WEST VANCOUVER B.C. V7V 1K6 CANADA
- Dr. MALO MICHELE
Laboratoire de Biologie et Ecologie
marine
Faculté de Nice
15 boulevard J. Garnier
06000 NICE FRANCE
- Mme MARCEL Jacqueline
I.N.R.A.
Laboratoire de Physiologie des Poissons
78350 JOUY EN JOSAS FRANCE
- Melle MARLOT Sylviane
I.N.R.A.
Laboratoire de Physiologie des Poissons
78350 JOUY EN JOSAS FRANCE
- Dr. MATTY
The University of Birmingham
Department of Biological Sciences
Gosta Green
BIRMINGHAM B4 7ET U.K.
- M. De MONTALEIBERT
I.N.R.A.
Laboratoire de Physiologie des Poissons
78350 JOUY EN JOSAS FRANCE
- Dr. OLIVEREAU H.
Institut Oceanographique
195, Rue St Jacques
75005 PARIS FRANCE

- Dr. Van OORUIT
Zoölogisch laboratorium
Rijksuniversiteit Utrecht
Sektie Vergelijkende Endocrinologie
Padualaan 8
UTRECHT 2506 N.L.
- Dr. PEREZ-REGADERA
Instituto Nacional Para la Conservacion
de la Naturaleza
Subdireccion General de Recursos
Naturales Renovables
Gran Via de San Francisco
35 MADRID 5 ESPAGNE
- Dr. PETER R.E.
Department of Zoology
The University of Alberta
EDMONTON, Alberta T6G 2E9 CANADA
- Dr. PEUFE J.
Zoölogisch laboratorium
Rijksuniversiteit Utrecht
Sektie Vergelijkende Endocrinologie
Padualaan 8
UTRECHT 2506 N.L.
- Dr. Au PING WEI
HONG KONG CHINE
Stagiaire au Centre National pour
l'Exploitation des Océans,
C.O.B de Bretagne B.P. 337
29273 BRÉST CEDEX
- Dr. PRIENE I.G.
University of Merceen
Department of Zoology
Tillydrone Avenue
ABERDEEN AB9 2TW U.K.
- Dr. PRIMAVERA J.
Seafdec Aquaculture Department
Suite 401 Malayaan Building
De La Rosa Corner Salcedo Sts.
MANILA, PHILIPPINES
- Dr. PUGNET P.
I.N.R.A. Laboratoire de Physiologie
des Poissons
78350 JOUY EN JOSAS FRANCE
- Dr. PUDOCK C
Ministry of Agriculture
Fisheries and Food
Laboratories
LOWESTOFT, Suffolk NR 330HT U.K.
- Dr. RAMOS A.H.
Departamento de Aguas Interiores
Av. 5 de Outubro, n° 52, 6 dt.
LISBOA PORTUGAL
- Dr. REINHOLD
Institut für Allegemeine Zoologie der
Johannes Gutenberg-Universität
6500 MAINZ, Saarstraße 21 GERMANY
- Dr. RICHTER C.J.J.
Wageningen University
Department of animal Husbandry
P.O. BOX 338
WAGENINGEN PAYS BAS
- M. RIVS
Centre National pour l'Exploitation des
Océans
39, avenue d'Iéna
75783 PARIS CEDEX 16 FRANCE
- Dr. SALESSE R.
I.N.R.A.
Laboratoire de Biochimie physique
Département de Biochimie et de Biophysique
Université Paris-Sud, Centre d'Orsay
91405 ORSAY CEDEX FRANCE
- M. SALMON Ch.
Muséum d'Histoire Naturelle
Laboratoire de Physiologie générale
et Comparée
7, rue Cuvier
75005 PARIS
- Dr. SCHREIER M.P.
Brooklyn College of the City University
of New York
Department of Biology
Brookford Avenue and Avenue H
BROOKLYN, New York, 11210 U.S.A.
- M. SANCHEZ RODRIGUEZ Mario
I.N.R.A.
Laboratoire de Physiologie des Poissons
78350 JOUY EN JOSAS, FRANCE
- Dr. SOBOLOWSKA
Academy of Agriculture
Institute of Applied Zoology
Al. Mickiewicza 24/28
30-059 KRAKOW POLOGNE
- Dr. SIEBH H.
Technische Universität München
Abtlg. Zoologie und Parasitologie
805 FREISING Weigenstephan GERMANY
- Dr. STOB J.
Institut für Tierzucht and Haustiergenetik
der Universität Göttingen
34 GÖTTINGEN GERMANY
- Dr. STUART KREGOR
University College of North Wales
Department of Zoology
The Brambell Laboratories
BANGOR, Gwynedd, LL57 2UW U.K.
- Dr. SUMPTER J.P.
University College of North Wales
Department of Zoology
The Brambell Laboratories
BANGOR, Gwynedd, LL57 2UW U.K.
- Dr. SUBBARAJ B.I.
Department of Zoology
University of Delhi
DELHI INDIE
- Dr. SZÜLLÖSI D.
I.N.R.A.
Laboratoire de Physiologie des Poissons
78350 JOUY EN JOSAS FRANCE
- Dr. TAN L.
Universiti Sains Malaysia
School of Biological Sciences
PENANG MALAYSIA
- Dr. TERLOU M.
Zoölogische Laboratorium
Sektie Vergelijkende Endocrinologie
Padualaan 8
UTRECHT 2506 N.L.
- Dr. THIBAUT Ch.
I.N.R.A.
Station de Physiologie animale
78350 JOUY EN JOSAS FRANCE
- Dr. THIBAUT M.
I.N.R.A. E.H.S.A.R.
Laboratoire d'Ecologie hydrobiologique
65 rue de St Briceux
34042 NERES SÈIXE FRANCE
- M. TRUHEN
Université de Rennes
Station Biologique de Paimpont
Paimpont
35380 PLELAN LE GRAND FRANCE
- Dr. UFAHAYAY S.
I.N.R.A.
Laboratoire de Physiologie des Poissons
78350 JOUY EN JOSAS FRANCE
- Dr. VAN REE G.E.
Rijksuniversiteit Utrecht
Zoölogisch laboratorium
Sektie Vergelijkende Endocrinologie
Padualaan 8
UTRECHT 2506 N.L.
- Dr. VOLKOV
Physiological Institute
Leningrad University
LEHRINGRAD 199164 U.S.S.R.
- Dr. WEIL C.
I.N.R.A.
Laboratoire de Physiologie des Poissons
78350 JOUY EN JOSAS FRANCE
- Dr. WILHELM C.
The University of Aston in Birmingham
Department of Biological Sciences
Gosta green
BIRMINGHAM, B4 7ET U.K.
- Dr. YAP K.O.
Seafdec Aquaculture Department
Suite 104 Malayaan Building
De La Rosa Corner Salcedo
MANILA PHILIPPINES
- Dr. YARON Z.
Tel Aviv University
Department of Zoology
RAMAT AVIS TEL AVIV ISRAEL
- Dr. ZAGUY S.D.
Patronato "Juan de la Cierva"
Instituto de Investigaciones Pesqueras
Parque Nacional
BARCELONA (3) ESPAGNE
- Dr. ZELL S.
Department of Zoology
University of Maine, Murray Hill
ORONO, Maine 04473 USA
- Dr. ZOHAR Y.
Israel Oceanographic and Limnological
Research Ltd.
Mariculture Laboratory
P.O.B. 1212
ELAT ISRAEL



Station Biologique de Paimpont, 35380 Plélan le Grand

Tél. (99) 09.80.32

Objet : Menus prévus pour le Colloque du 18 au 23 septembre 1977

Référence : MCQ

Midi

Soir

Dimanche 18

Repas froid:
Charcuterie - Pommes chips
Salade
Fromage
Fruits

Lundi 19

Salade de Betteraves-Sardines
Rôti de veau-Haricots verts
Fromage
Fruits

Potage
Escalope de dinde-Pommes
rissolées
Salade
Fruits

Mardi 20

Salade de carottes-Maquereaux
Rosbeaf - petits pois
Gruyère
Salade de fruits

Repas amélioré :
Fruits de mer
Cruautés - Terrines
Gigot d'agneau
Flageolets-Pommes dauphines
Salade
Fromage
Fruits
Far breton

Mercredi 21

Salade de pommes de terre-museau
Lapin chasseur - Spaghettis
Salade
Fruits

Potage
Langue de boeuf-Salsifis
Salade
Saint Paulin

The Forest of Paimpont

The forest of Paimpont is the last remnant of the great forest of BROCELIANDE or BRECILIEN, well known as a masterpiece of the King Arthur Romances.

The legend originated in WALES and, at the beginning, was only recorded in the memory of the bards. The first written version was the collection of stories called The MABINOGION.

In Cornwall and Brittany, the bards sang the same song, but there is no written trace of the Breton versions. Nevertheless, we have many arguments in favor of a Breton origin of the numerous French Arthurian Romances which appeared very early (1160 - 1180); for example, the names in the French versions are closer to Breton than to Welsh. This origin explains why in the French Romances, the Knights of the Round Table "jump" from Britain to Brittany and vice-versa.

You will now understand how our forest may be closely associated with the "matter of Britain".

One of the most famous places in the forest is the "Val sans Retour" where MORGAN, Arthur's half-sister, kept her unfaithful lover, the Knight GUYOMARCH, and all the numerous unfaithful lovers trespassing on the limits of the vale. The fountain of BARENTON is also famous. The water, cold as marble, boils like hot water, and when water is dropped on the stone called "Perron de Merlin", it induces a marvelous tempest and storm. You will also see the Bridge of the Secret, where LANCELOT and GUINEVERE yielded to their passion, the Fountain of Youth, and many other marvels.

MERLIN's grave is still to be seen near the "Val sans Retour", but the true believer knows that MERLIN, bewitched by VIVIAN, is actually sleeping somewhere in the forest in the Prison of Woven Air.

J. L.