

a newsletter on the biology and control of sea lice for researchers, aquaculture and fisheries industry, educators, consultants, and management authorities

New project on sea lice control on fish farms

A new project has been funded under the European Union FAIR (aquaculture) research programme entitled 'Biology and management in the control of lice on fish farms' (contract number CT96-1615). The project is a 'Concerted Action' and so does not involve new research but rather facilitates the communication of information related to the control of lice on fish farms. This will be achieved through:

- providing a [World Wide Web site](#) and [e-mail network](#)
- hosting of [meetings](#) (workshops and conferences)
- establishment of a [register of researchers](#)
- producing a computerised [bibliography](#)
- [publishing](#) the bibliography, newsletter, register of researchers, and proceedings of meetings

The project is co-ordinated by Dr [Mark J. Costello](#) (EcoServe, Dublin) in partnership with Dr [Geoffrey A. Boxshall](#) (Natural History Museum, London), Mr [Kjell Maroni](#) (KPMG, Lauvnes), Mr [Per Gunnar Kvenseth](#) (Norsk Hydro a/s), and Dr [Carmel Mothersill](#) (Dublin Institute of Technology).

Enquires about the project should be sent to:

- mcostello@ecoserve.ie
- Dr M. J. Costello, Ecological Consultancy Services Ltd, 7 Glenmalure Park, Rialto, Dublin 8, Ireland;
- or any of the project's partners.

World Wide Web site

<http://www.ecoserve.ie/projects/sealice/index.html>
We invite organisations and persons with related WWW sites to (a) make links with this site, and (b) inform us of their sites so we can link this site to theirs.

E-mail network

To join the e-mail list for this project please send your e-mail address to mcostello@ecoserve.ie.

Meetings

Three meetings will be held, in

- ⇒ 1997 - [Trondheim](#), Norway (see next page)
- ⇒ 1998 - [Amsterdam](#), The Netherlands
- ⇒ 1999 - [Dublin](#), Ireland

Amsterdam, 20-24 July 1998

Theme 'Advances in lice biology'

As part of 4th international crustacean congress.

This meeting will be a scientific conference rather than a workshop. To get on the congress mailing list contact ICC 4, c/o Wil van Zijl, University of Amsterdam, Vakgroep SEP, P.O. Box 94766, HL-1090 GT Amsterdam, The Netherlands; fax +31-20-525 5402; e-mail zijl@bio.uva.nl

Dublin, 1999

Theme 'Integrated lice control'; may include host defences, lice biology, management practices, use of chemotherapeutants, fallowing, wrasse, etc.. Suggestions are welcome.

Current research projects

A list of current research projects relevant to sea lice control is being compiled for the first workshop. This will both facilitate communication between researchers and others and help identify areas with insufficient research. (see page 7)

1997 WORKSHOP ON SEA LICE CONTROL

Dates: 6 - 8 November 1997

Venue: Lilletorget Hotel, Trondheim, Norway

Convenors: Kjell Maroni and Per Kvenseth

The programme involves introductory lectures followed by discussion groups. Groups involving industry have parallel sessions in English and Norwegian.

This is the first of three meetings to be held on sea lice control as part of an EU FAIR Concerted Action project entitled 'Biology and management in the control of lice on fish farms'. This workshop will include:

- Special group discussions on aspects of lice control involving researchers and industry
- Each session will begin with an Introduction or Opening address which will summarise available knowledge and identify the issues and questions to be discussed in the following discussion groups.
- Invited experts on lice biology, lice control on fish farms, and the natural defenses of fish to external parasites will make presentations aimed at a wide audience and contribute to discussions
- Ends with excursion to a salmon farm to demonstrate a standard procedure for use in monitoring lice levels on salmon farms
- An audience of 100-150 researchers and fish farmers is expected.
- Facilities for the promotion and sale of products, books and other materials can be arranged in advance through the Workshop Secretariat (contact details page 4).

Provided at the Trondheim workshop will be:

- ◆ Latest details of the Concerted Action programme;
- ◆ Draft indexed bibliography on lice control;
- ◆ Draft register of researchers interested or active in the area of lice control;
- ◆ Draft list of current research projects relevant to sea lice control;
- ◆ Draft 'best current advice for lice control';
- ◆ Draft standard protocol for sampling lice on salmon farms;
- ◆ Abstracts of recent and current research in area of lice control.

Following the conference an edited volume is to be published and provided free to delegates containing:

- * Preface introducing the Concerted Action programme;
- * Indexed bibliography of literature;
- * Register of researchers;
- * List of current research projects relevant to sea lice control;
- * Best current advice for lice control;
- * Protocol for sampling lice on salmon farms;
- * Abstracts of recent and current research;
- * Reports and conclusions of discussions held during the workshop, including priorities for further research and management;
- * List of delegates at the workshop.

In addition a press release, and article for trade magazines, on the conclusions of the workshop will be produced.

PROGRAMME

Thursday 6 November 1997 - Trondheim

Hours	Activity	Session leader (s)
09.30	Registration	KPMG secretary
10.00 - 10.10	Opening	M. J. Costello, K. Maroni
10.10 - 10.40	Lice biology	G. Boxshall
10.45 - 12.00	Group on lice biology "How can our knowledge on lice biology be used to reduce lice problems in farms"	G. Boxshall - English P.A. Heuch - Norwegian
12.00 - 13.00	Plenary presentation and discussion	G. Boxshall and P. Heuch
13.00 - 14.30	Lunch	
14.30 - 15.15	Farm management - treatment methods - speakers from Norway and Scotland	P. G. Kvenseth
15.15 - 16.30	Group on lice treatment "Which methods are best under different circumstances, and why"	P. Andersen - Norwegian J. Treasurer - English
16.30 - 17.00	Coffee	
17.00 - 18.00	Plenary presentation and discussion	P. G. Kvenseth, J. Treasurer
20.00	Dinner	

Friday 7 November 1997

Hours	Activity	Session (leaders)
08.30 - 09.00	Host defences and vaccination	Alberto Villena
09.00 - 11.00	Short communications à 5 min	Participants, led by K. Maroni
11.00 - 12.00	Standard protocol for lice sampling - research purposes - farms control	K. Boxaspen, M. J. Costello P. G. Kvenseth
12.00 - 13.30	Lunch	
13.30 - 15.00	Group on "Development of best strategy for lice control under different conditions to be specified"	4 groups, 2 in Norwegian and 2 in English
15.00 - 15.30	Coffee and sandwiches	
15.30 - 16.30	Concluding remarks - standard lice sampling method - best lice control strategies	K. Boxaspen, M. J. Costello P. G. Kvenseth
17.30	Bus departure for Flatanger (max 45 persons)	
20.30	Arrival Flatanger	
21.00	Dinner	

Saturday 8 November 1997

Hours	Activity
09.00 - 12.00	Visit salmon farms, practical demonstration of lice sampling and counting
12.00 - 13.00	Lunch
13.00 - 14.30	Travel to Overhalla, Alpharma vaccine production site
14.30 - 17.00	Visit Alpharma
17.00 - 18.30	Travel back to Flatanger
20.00	Dinner

Sunday 9 November 1997

Hours	Activity
09.00 - 11.30	Travel to Værnes airport

To attend the workshop contact:

Contact Ellen Bugen or Inger Berger at:

Sea lice workshop secretariat,
KPMG Management Consulting AS,
Centre for Aquaculture and Fisheries,
P.O. Box 2065, 7001 Trondheim, NORWAY.

Phone: + 47 - 73 - 51 44 60; Fax: + 47 - 73 - 51 45 35.
Email: aquakpmg@sn.no

Provide your name, contact details (address, telephone, fax, email), organization (for name badge), and days attending. Places on the excursion are limited and will be allocated on a first paid first served basis. Please provide this preliminary registration first and you will be invoiced later.

Venue Lilletorget hotell & møtesenter
Cicignons plass, 7001 Trondheim, NORWAY
Phone: + 47 - 73 - 52 05 24; Fax: + 47 - 73 - 53 21 43

Costs

Basic registration	NOK 500
Excursion	NOK 100 (includes travel)

Registration fees include attendance, copy of information pack at the meeting, copy of full proceedings published after the meeting, lunches, coffee and teas during the workshop. Each delegate makes their own travel and accommodation arrangements and pays for their own evening meals (unless sponsors found). Cheques should be made payable to 'KPMG Management Consulting'.

A reduced registration rate and subsidy for attendance may be possible for students and others with low resources. If you feel you are in this category please explain this in a letter or fax to the Workshop Secretariat, and provide supporting documents (e.g. copy current student card, letter of support from supervisor). Preference will be given to persons with new contributions to present to the meeting (e.g. complete but unpublished research results, preliminary research findings, new hypotheses).

Accommodation

Delegates must make their own accommodation arrangements. Rooms have been allocated for delegates in the following two hotels for the meeting, but you must arrange the booking yourself.

1. Astoria hotell, Nordre gate 24, 7010 Trondheim.
Phone: + 47 - 73 - 52 95 50; Fax: + 47 - 73 - 52 07 57.
Special workshop price NOK 500- per night.
2. Lilletorget Hotell & møtesenter (venue of meetings). NOK 725 per night.

Delegates who pay in advance for the excursion will be accommodated in the Zanzibar Inn, 7840 Lauvsnes, Norway (phone: + 47 - 74 - 28 83 00; Fax: + 47 - 74 - 28 82 66). Accommodation and meal costs to be finalized.

A full bibliography of publications relevant to the control of sea lice on fish farms is being prepared as part of the Concerted Action project. References additional to those referred to by Costello (1993) and papers in the books edited by Boxshall and DeFaye (1993) and Sayer *et al.* (1996):

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This newsletter is distributed free to over 200 interested persons twice a year.

All the information in *Caligus* is also displayed on the World Wide Web at <http://www.ecoserve.ie/projects/sealice>.

Caligus is funded as part of a 'Concerted Action' project under the European Union FAIR (aquaculture) research programme (contract number CT96-1615, entitled 'Biology and management in the control of lice on fish farms'.

The European Commission exercises no role in newsletter content or dissemination, and is not responsible for any views expressed by contributors.

Contributions on

- new and current research projects,
- forthcoming meetings,
- reviews of past meetings,
- observations on lice biology or related subjects,
- open letters raising questions or expressing points of view,
- advertisements (e.g. lice control products),
- new publications (scientific papers, books, reports, world wide web sites)
- and other information of possible interest to readers should be sent to The Editor of *Caligus*, Ecological Consultancy Services Ltd, 7 Glenmalure Park, Rialto, Dublin 8, Ireland; Email mcostello@ecoserve.ie.

BIBLIOGRAPHY

A bibliography of publications relevant to sea lice control on fish farms is being compiled (see pages 5 and 6). Please send references, including papers 'in press' (i.e. accepted for publication but not yet published, to mcostello@ecoserve.ie for inclusion in this bibliography. The bibliography will be published on the World Wide Web and in the proceedings of the November 1997 lice control workshop in Trondheim (see pages 2 to 4). Please note that some publications are not be easily available by inter-library loan if they do not have an ISBN (book), ISSN (periodical), or be a thesis lodged in a university library. If this may be then case (e.g. ICES reports) please add the address at which copies of the publication are available from to the end of the reference.

CURRENT RESEARCH PROJECTS

A list of current research projects relevant to sea lice control is being compiled for the first workshop. This will both facilitate communication between researchers and others and help identify areas with insufficient research. Please send

- ⇒ name and contact details of individual or research group leader
- ⇒ explanatory title of research project indicating type of study (e.g. field or laboratory, experimental or survey) and location
- ⇒ names of researchers involved
- ⇒ duration of research (start and end).

REGISTER OF RESEARCHERS

A preliminary list of over 170 persons has been prepared. Each person has been sent a letter with a copy of this newsletter asking them to confirm their interest, provide contact details, identify their particular interests, and state whether they wish to be listed on the register which will be published in the Trondheim workshop proceedings and on the World Wide Web.

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