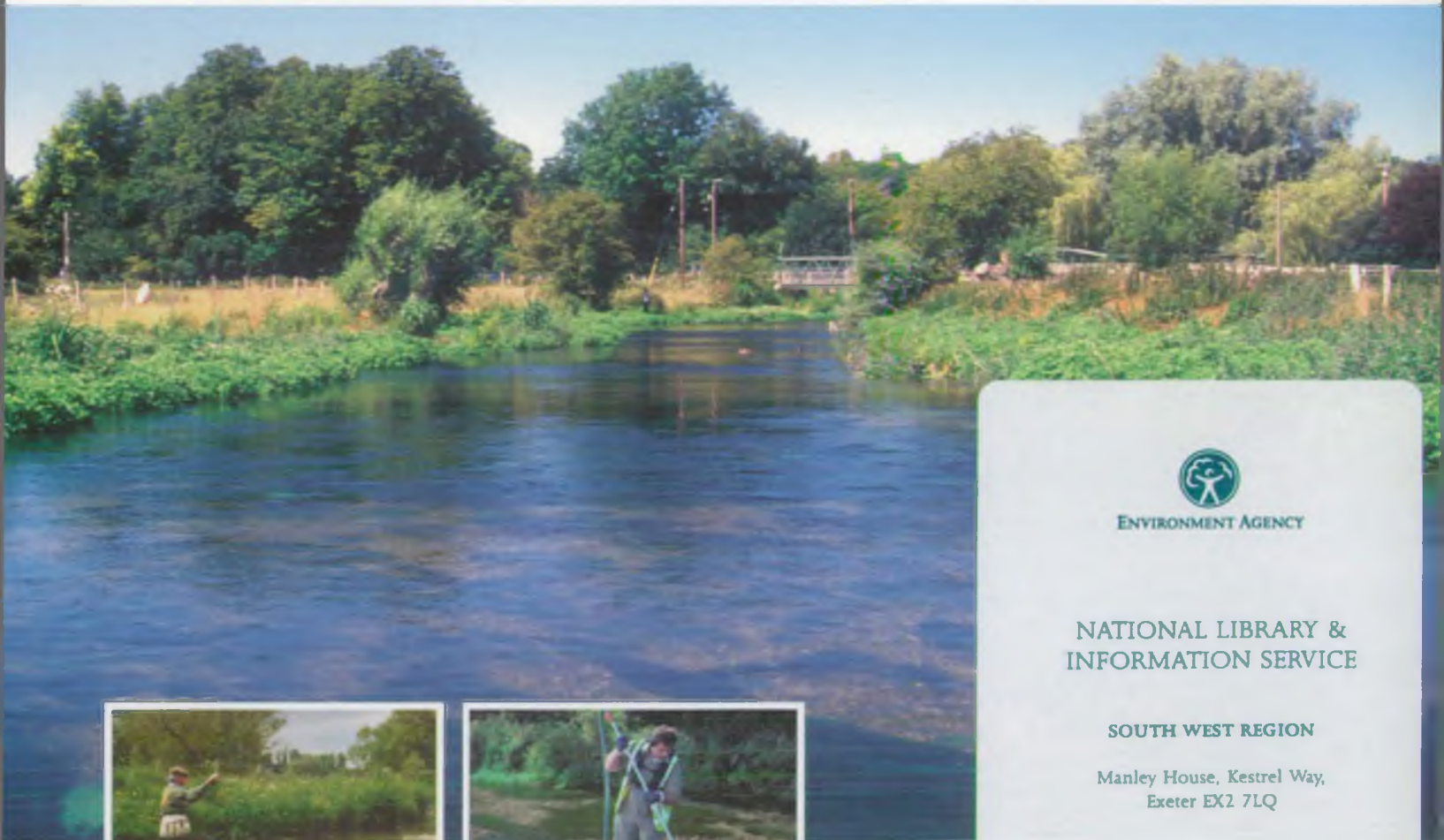


CHALK STREAM MALAISE

ANGLERS' VIEWS ON CONTRIBUTORY FACTORS



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A survey carried out in 2000 among chalk stream fly fishermen,
fishery owners, angling club secretaries and river keepers



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CHALK STREAM MALAISE



Algae smothering *Ranunculus*
(water crowfoot) ▶



During the year 2000 a 'Chalk Streams Fly Trends Study' was carried out involving the analysis of questionnaire responses from 365 fly fishermen, angling club secretaries, and river keepers from chalk rivers in southern England.

The study tackled two issues; firstly to evaluate trends in aquatic fly abundance over recent decades and immediate past years, and secondly to ascertain from the respondents what their views were on the 'Chalk Stream Malaise'. The 'Report on the Millennium Chalk Streams Fly Trends Study' is published by the Environment Agency and the Wiltshire Fishery Association as a separate report.

'Chalk Stream Malaise' is a generic term, coined by anglers and often ascribed to any symptoms and observations relating to a deterioration in

classic chalk stream habitat. As such, the various elements reflect both 'factors', for example low flow, and 'drivers' i.e. things which influence the factors such as in this example abstraction or drought conditions.

It is also recognised that many of the elements listed in the questionnaire are inextricably linked, e.g. low flows could increase the concentration of pollutants, rate of siltation, and indirectly affect weed growth, algae on weeds, all of which could be exacerbated by channel modification and poor habitat.

The questionnaire made no attempt to distinguish between the potential 'factors' or 'drivers' or to link the various elements in any way, but essentially sought to tease out from respondents what in their view were the key issues and causes for concern both now and for the future.



In general, current management practices affecting the fishery ranging from stocking, overfishing, weedcutting and competition were not considered to be important elements. Similarly but also surprisingly, the riverine habitat and past engineering practices of dredging, straightening and lowering of river bed levels were not considered to be an important factor in Chalk Stream Malaise. This despite the fact that in recent years there has been a plethora of initiatives relating to river restoration, rehabilitation or habitat enhancement on many chalk stream catchments predominantly at the request of fishing interests.

Approximately 60% of respondents considered swan damage to be a key factor although conversely there was no clear indication that lack of weed in general was an issue, perhaps reflecting the fact that this is a local 'river reach' based phenomenon rather than being endemic and extensive on all catchments.

Lack of fly was, not surprisingly, cited as a key issue.

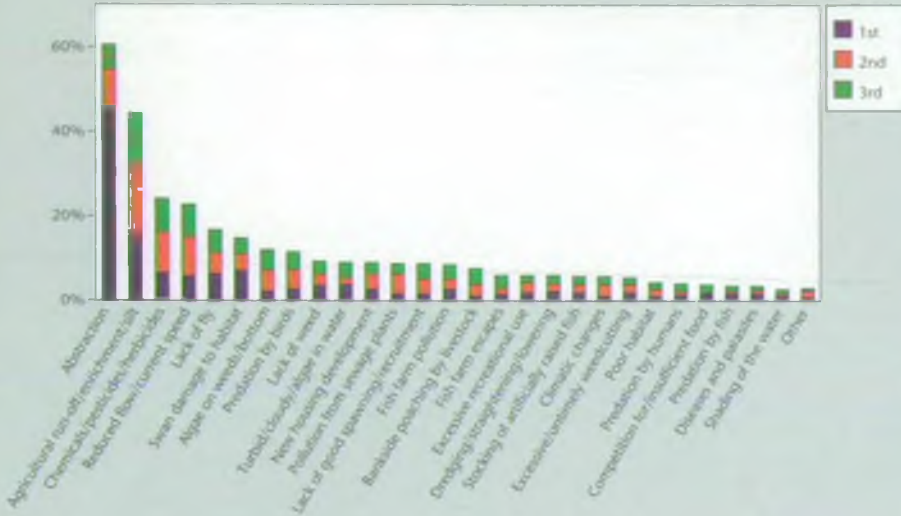


*Main picture: Cattle damage to channel and river margin habitat
Top left: Land use changes increasing sediment input to rivers
Top right: Cleaning silt laden salmon spawning gravels
Middle right: River channel changes from historic dredging activities
Bottom right: Swans feeding on Ranunculus (water crowfoot)*

Chalk Stream Malaise

Chalk Stream Malaise Elements of the Malaise on your river

Priority? (Base: All respondents = 365)



▲ Figure 2

Top Ten Priorities

Respondents were asked to prioritise the issues ranking them from 1-10 and the results analysed by looking at the 1st, 2nd and 3rd choices (Figure 2). The ranking closely reflected identification of the key elements outlined above, with abstraction overwhelmingly accounting for 1st choice of over 45% of respondents followed by problems associated with agricultural practice including those relating to the use of pesticides and herbicides. Again swan damage and lack of fly were considered reasonably high priority issues.

THE FUTURE

The final question in this section asked respondents to identify which elements would constitute problems for the future.

Figure 3 indicates that abstraction and agricultural problems were again evident as top priority issues for the future, together with new housing developments within the catchments and potential climatic changes, the latter being an unknown quantity with respect to effects on inland waters.

The 'Chalk Stream Malaise' questionnaire has been particularly useful in teasing out various issues of concern to fishermen relating to a large number of different chalk streams across southern England. It has helped to inform the Agency which are the key issues implicated, but also has raised awareness among fishing interests and other key organisations who are either responsible for directly managing or influencing activities affecting chalk rivers.

Chalk Stream Malaise Elements of the Malaise on your river

The future? (Base: All respondents = 365)



▲ Figure 3

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Respondents were asked :

- Whether each element in the table (right) was a factor on the rivers they fish by answering Yes; No or Don't Know.
- What they judged to be the top 10 priorities to be addressed by writing in rank order of importance - 1,2,3.....up to 10.
- Which elements were thought to be a particular problem in the future.



Mayfly (*Ephemera danica*) ▶

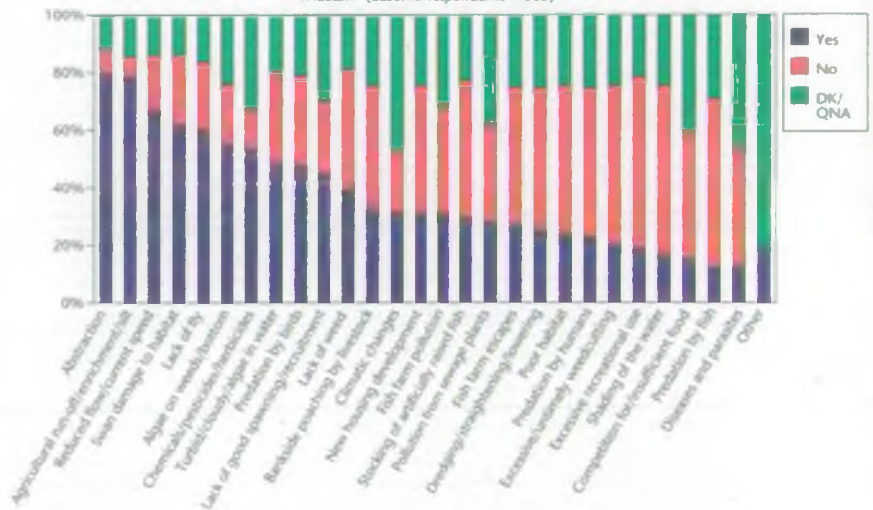
- 1 Abstraction
- 2 Agricultural run-off/enrichment/silt
- 3 Algae on weeds/bottom
- 4 Bankside poaching by livestock
- 5 Chemicals/pesticides/herbicides
- 6 Climatic changes
- 7 Competition for/insufficient food
- 8 Diseases and parasites
- 9 Dredging/straightening/lowering
- 10 Excessive recreational use
- 11 Excessive/untimely weedcutting
- 12 Fish farm escapes
- 13 Fish farm pollution
- 14 Lack of fly
- 15 Lack of good spawning/recruitment
- 16 Lack of weed
- 17 New housing development
- 18 Pollution from sewage plants
- 19 Poor habitat
- 20 Predation by birds
- 21 Predation by fish
- 22 Predation by humans
- 23 Reduced flow/current speed
- 24 Shading of the water
- 25 Stocking of artificially raised fish
- 26 Swan damage to habitat
- 27 Turbid/cloudy/algae in water
- 28 Anything else?

What are the key elements?

The results in Figure 1 indicate a clear belief that two elements are crucial components of the 'Chalk Stream Malaise'. Approximately 80% of respondents felt that the key factors having a detrimental effect on chalk streams are abstraction and the associated reduction in flow and current speed, together with water quality problems, resulting predominantly from agricultural activities such as soil run-off, siltation and nutrient enrichment from fertilisers and other chemicals including pesticides and herbicides. The views of the fishermen are therefore in line with the general findings of the 'Ephemeroptera Scoping Study' from the Institute of Freshwater Ecology which indicates that flow and water quality are among the key components in influencing ephemeroptera population abundance.

Chalk Stream Malaise
Elements of the Malaise on your river

A factor? (Base: All respondents = 365)



▲ Figure 1

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