

Influence of trapping



- Mats Hebrand, FVT
- Some experiences
- Different methods
- Stock monitoring
- Swedish rivers
- Migrating salmonids

- 15 min, questions

Traditional method



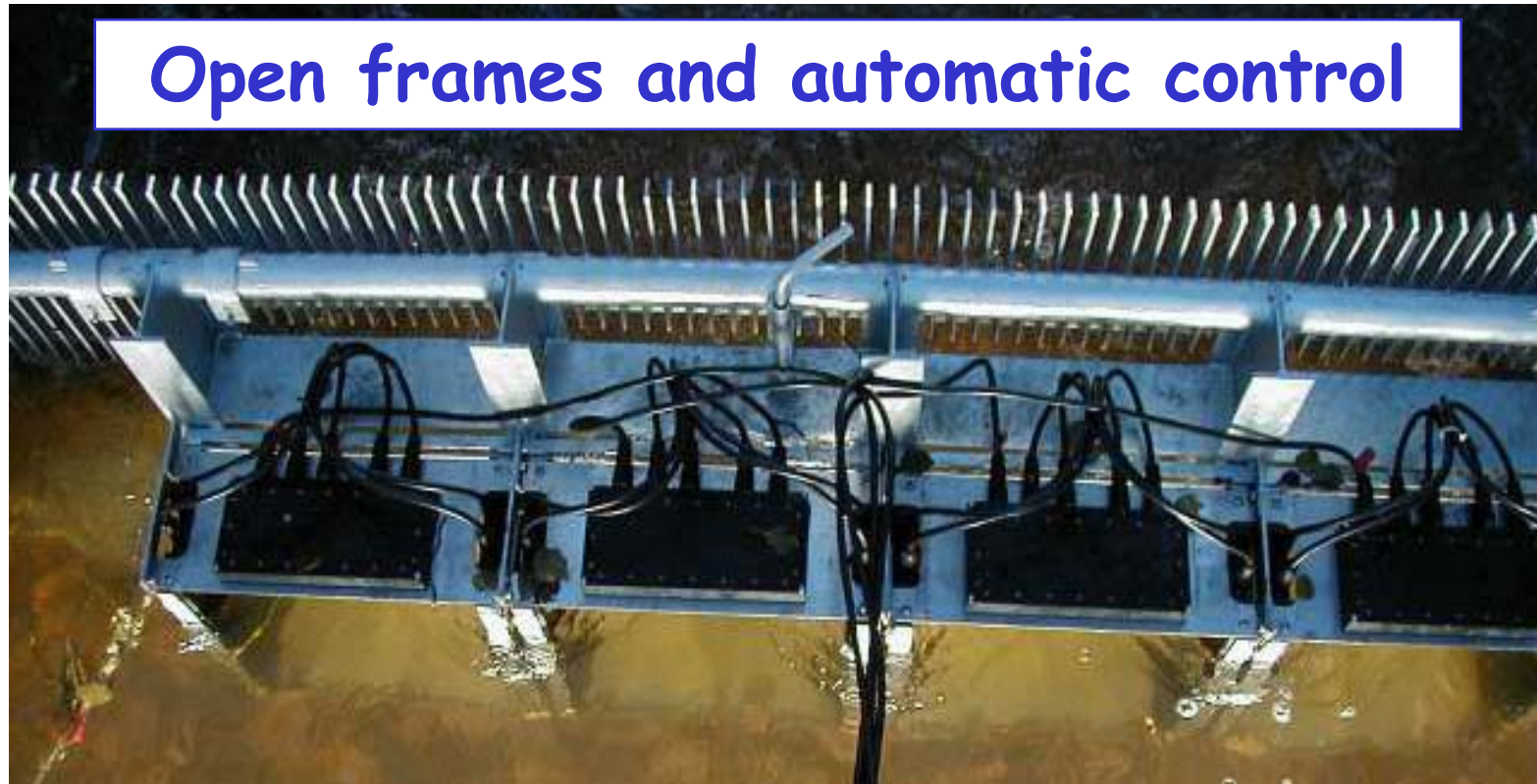
Trapping and
manual control



- Labour intensive
- Migration disturb
- Stress fish
- Not always correct

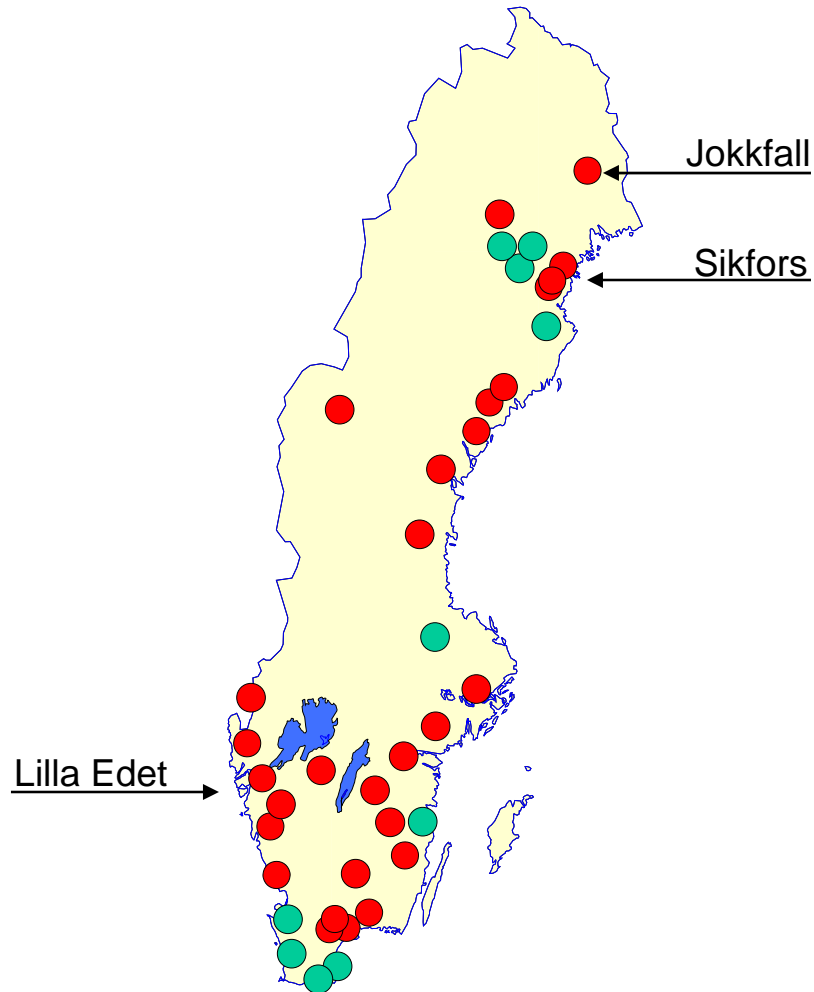
- + Detailed result
- + Gene harvest
- + Sampling

Modern method



- + Continuous monitoring
- + Detailed results
- + No fish handling
- + Low total costs

Fish counters in Sweden



Installations

- 80 % Vaki
- 40 sites

Clients

- 35 % Municipal auth
- 25 % Government auth
- 25 % Power Companies
- 15 % Fisheries

L Edet, River Göta älv



- New fishway
- Pool & weir
- Submerged orifice
- Concrete
- dH 6 m, L 75 m
- Q 1,5 m³/s

L Edet, River Göta älv



- Catch chamber at upper end of fishway
- Grid gate at inlet
- Lift device

L Edet, River Göta älv



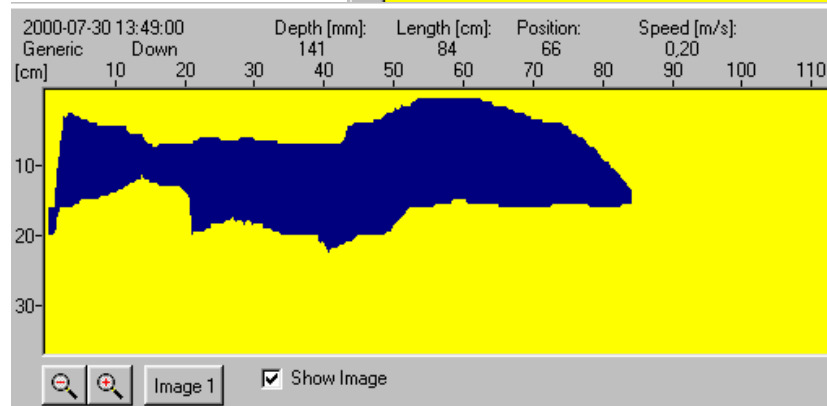
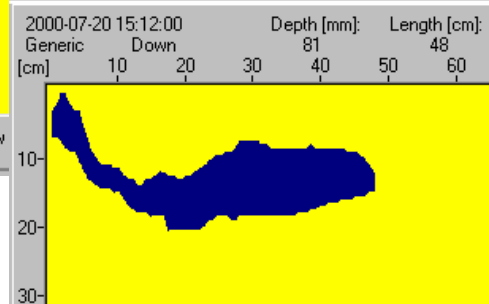
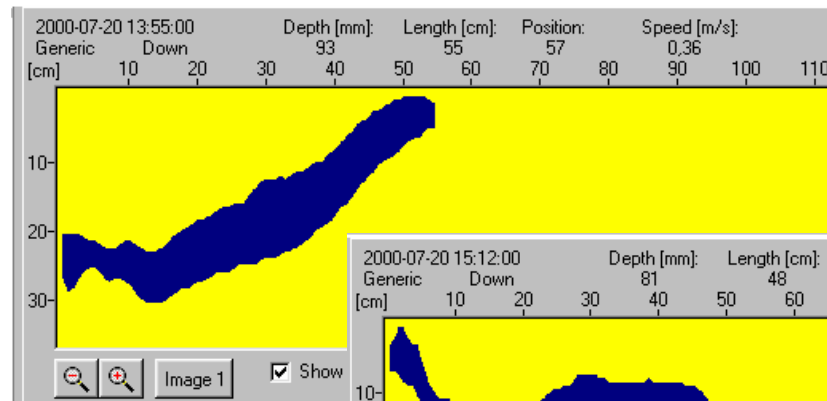
- Inside view of catch chamber
- Plough gate at entrance
- Grid floor with lift

L Edet, River Göta älv



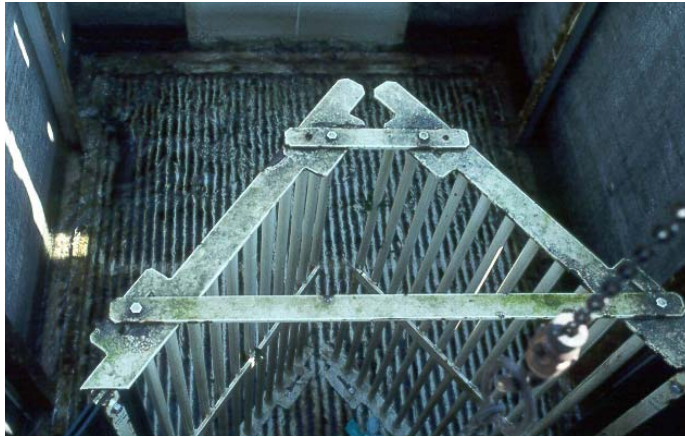
- Automatic fishcounter
- Second uppermost chamber
- Just below trapp

L Edet, River Göta älv



- Passive downstream drift (nose up/down)
- Less accurate images

Slip away

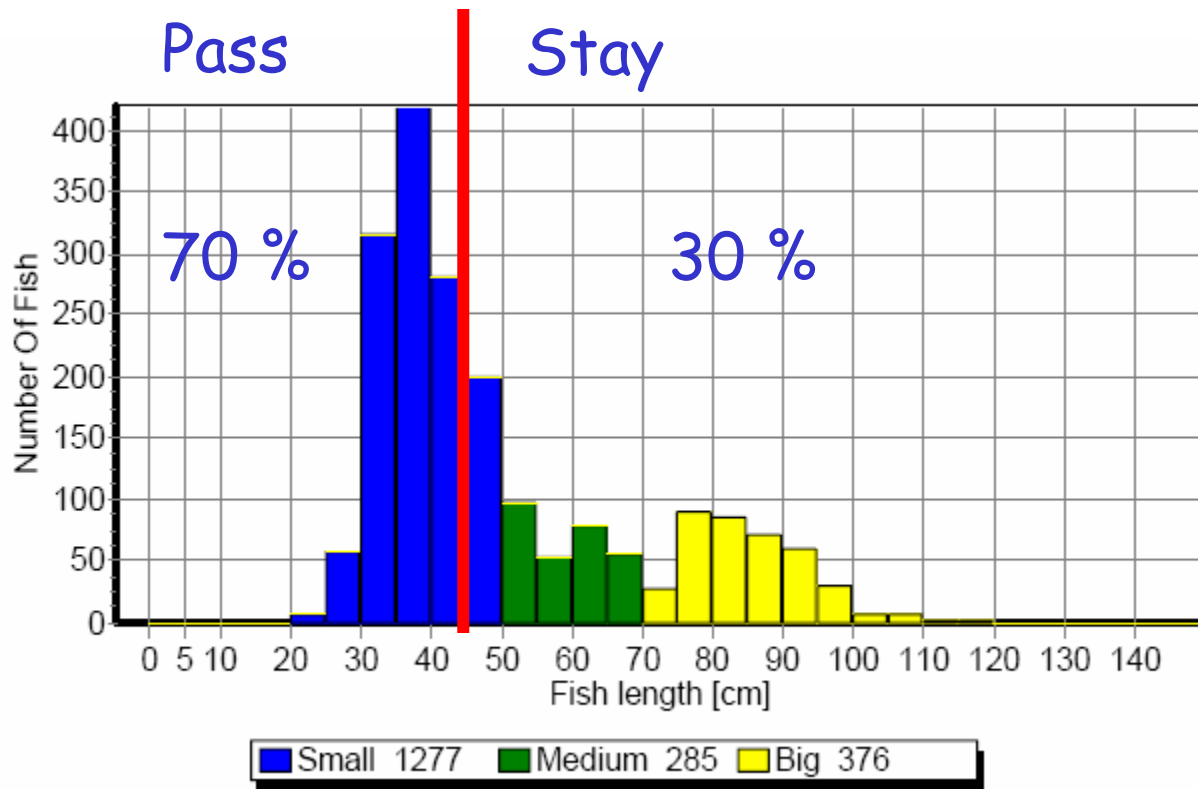


L Edet 2000

Method	Up (n)	Dn (n)	Passed (n) (%)	Days (n)
Old	524	470	54 11	84
New	118	0	118 100	69

Selection

L Edet 2000



Sikfors, River Piteälven

Results 2000-2001

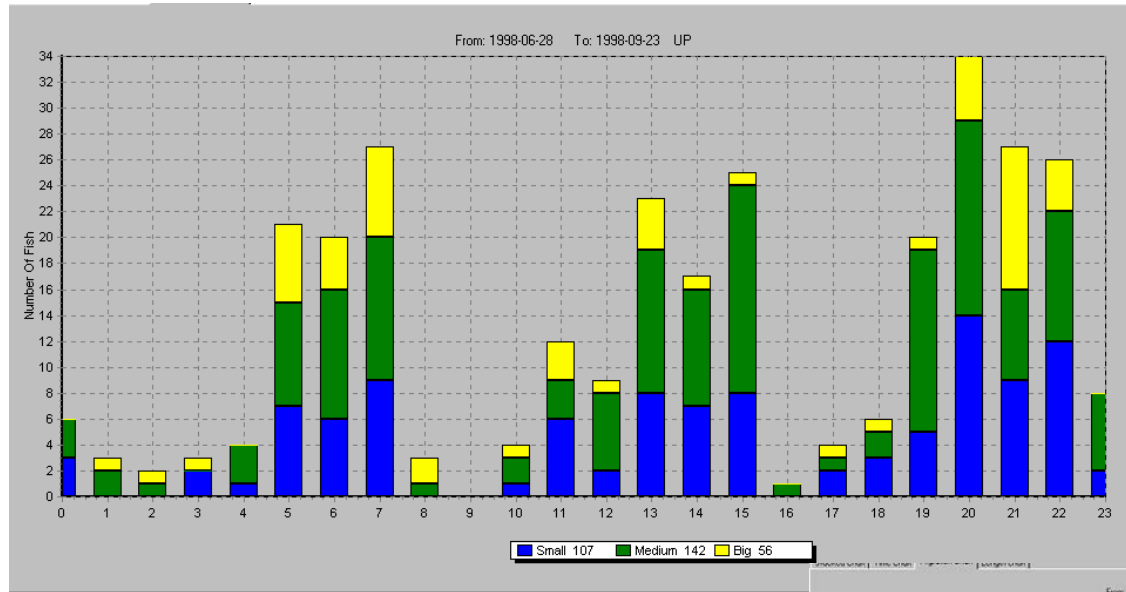
Method	Up (n)	Dn (n)	Passed (n)	(%)
Old	1661	1165	496	30
New	>1000	0		100

Jokkfall, River Kalixälven

Results 1998-2000

Method		Up (n)	Dn (n)
Old	(1998)	2459	320
New	(1999)	2044	5
New	(2000)	2519	4

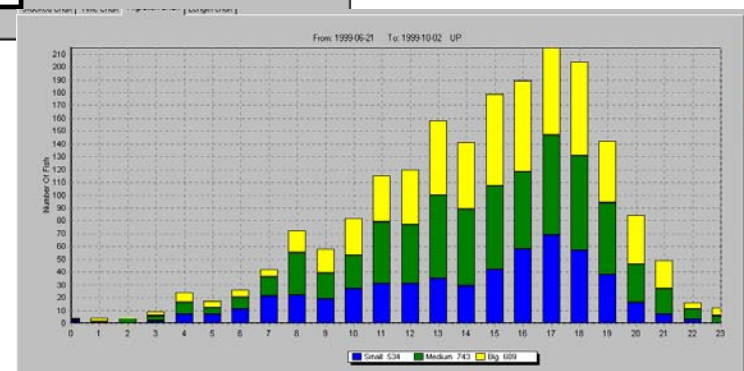
Disturbance



Dn 1998

Up 1999

- 2 x 4h disturbance at best time
- Main activity in daylight



Conclusions



- Traps in fishways are a bigger obstacle for migrants than expected
- Operating traps cause serious disturbances of the migration
- Uncritical use may result in incorrect monitoring results

Recommendations

Stock monitoring

- Consider open technics, e.g. automatic counters or videocameras

Sampling or collecting

- Consider best time of day for operation (late evening och early morning)
- Consider use of covering shelter or roof
- Consider location at fast water

