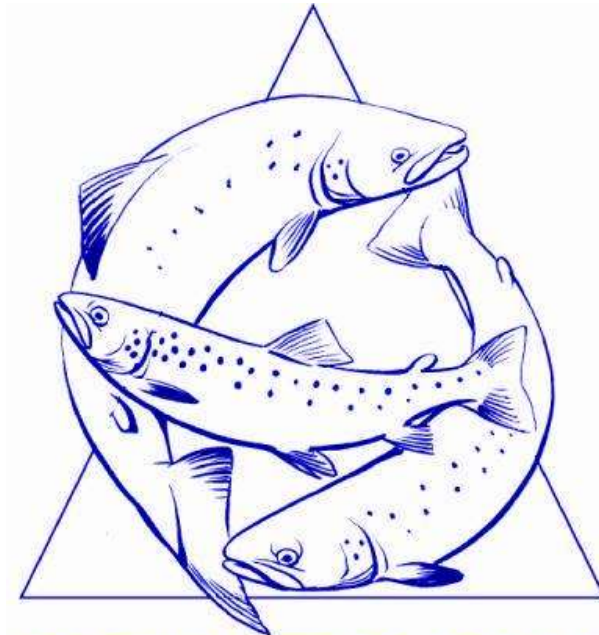


2006

ELECTRO-FISHING SURVEY

RESULTS & REPORT



**DEVERON
BOGIE
ISLA**

OBJECTIVES

The main objectives of the 2006 survey were:

1. Monitor those sites above removed or modified obstacles
2. Continue to survey "core" sites to assess long term trends
3. Provide base line surveys in burns and watercourses within the catchment of the proposed wind farms in the Clashindarroch & Aultmore Forests.
4. Provide base line surveys in burns not affected by the proposed wind farm but will act as control sites for comparative purposes.

SALMON DENSITIES & PRESENCE/ABSENCE

<u>SECTION</u>	<u>AV: DENSITY</u>	<u>SITES</u>	<u>PRESENCE</u>	<u>ABSENCE</u>
LOWER DEVERON	0.62	4	4	0
MIDDLE DEVERON	0.56	4	4	0
UPPER DEVERON	1.42	11	8	3
ISLA	0.77	11	8	3
BOGIE	1.50	20	15	5

The following sites held zero salmon:

Suc1	Succoth	(Upper Deveron)
Goul1	Gouls	(Upper Deveron)
Cal	Callanach	(Upper Deveron)
CW1	Craigwater	(Bogie)
Lg 0	Lag	(Bogie)
Lg 1	Lag	(Bogie)
Ea 0	Ealachie	(Bogie)
Bg 1	Bogrotten	(Bogie)
Am 0	Aultmore	(Isla)
Fern 1	Fernking	(Isla)
Thb 1	Thievesbush	(Isla)

TROUT DENSITIES & PRESENCE/ABSENCE

<u>SECTION</u>	<u>AV: DENSITY</u>	<u>SITES</u>	<u>PRESENCE</u>	<u>ABSENCE</u>
LOWER DEVERON	1.08	4	4	0
MIDDLE DEVERON	0.52	4	4	0
UPPER DEVERON	0.67	11	10	1
ISLA	0.77	11	11	0
BOGIE	1.73	20	20	0

The following sites held zero trout:

Suc 1	Succoth	(Upper Deveron)
-------	---------	-------------------

COMMENTS AND OBSERVATIONS.

- For the third consecutive year we found the **Succoth** burn supported no salmon or trout.. A series of waterfalls maybe the reason there are no salmon but we would have expected to find trout. The absence of trout suggests a water quality problem, possibly during the planting of conifers and the subsequent silt. It contains very good habitat and should be used to re-stock which will at least determine whether water quality is the reason behind the problem.
- The **Craigwater** (Bogie). Trout fry and parr were present after removal of tree branches by Forest Enterprise.
- The upper reaches of the **Glen** burn (Upper Deveron) has recently been obstructed by fallen trees. We found salmon parr but no fry, confirming that adults could not progress to this area. These trees have now been removed by Forest Enterprise.
- The **Upper Deveron** site D5 had very low trout populations but high salmon fry density.
- The **Auchintoul** burn (Middle Deveron) site had been dredged in spring 2006 which had removed all salmon fry. A diesel spill 1km upstream probably contributed to a very low trout population. Upstream of these sites salmon fry and parr were present which confirms that the removal of the Kinnairdy dam has been successful.
- The **Crombie** burn (Middle Deveron) is supporting spawning salmon with fry being present. This burn had been degraded by silage pollution in the past.
- The **King Edward** burn site was planted out with sea trout in 2004 so the very low number of trout parr was very disappointing.
- A presence/absence survey of the **Burnend** burn demonstrated a high density of salmon fry (approx: 3/sq:m)
- The **Ness Bogie** again produced a high salmon population and healthy numbers of trout juveniles.
- The **Tillathrowie** had a surprisingly good salmon fry figure considering how high up the catchment the site lies.
- The **Lag** burn (Lg10 Bogie) site held a very high number of trout fry. This could be the result of sea trout spawning above the modified Irish fords.
- The **Lag** burn (Lg13 Bogie) site also showed good salmon and trout fry numbers.

- The **middle Bogie** sites hold low trout populations compared to the Upper Bogie and its tributaries.
- The **Ealachie and Bogrotten** burns held no salmon fry, probably due to low water during the 2005 season.
- The **Towie** burn (Isla) provided a salmon parr after 2 years of planting out fry from the hatchery, probably the first salmon to populate this burn for over 100 years after the removal of the Towiemore dam.
- The **Aultmore** (Isla) held no salmon in the Am 0 site in good in-stream habitat. However the Am 10 site has increased the salmon fry density six fold where we made improvements to the bank which had collapsed leaving little or no in-stream cover. The trout figure has also increased dramatically in Am 10 site.
- The **Garrel** burn site (Isla) showed no salmon parr after re-seeding with fry from the hatchery in 2005, but did provide fry which gives us proof that the fish pass is providing the facility for adults to migrate upstream to spawn.
- A presence/absence survey of the upper **Davidson** burn did not yield any salmon fry. This confirms our suspicion that the Scottish Water weir prevents salmon upstream migration in conditions of low water such as the 2005 season.
- The **Isla I18** site produced more than doubled the fry density from 2005 and by 100 fold from 1991. This could be the result of the fish ladder which was installed at Strathisla Distillery during 2005.

SUMMARY OF THE 2006 SURVEY

- The extensive number of sites surveyed on the **Bogie** system suggests that both salmon and sea trout are spawning in good numbers and the system is supporting a healthy fry production.
- The **Isla** system above Keith is not producing to its potential and we should investigate further modifications to the partial obstacles at the Linn Pot. The Scottish Water weir is definitely obstructing upstream migration on the Davidston burn other than during constantly high water levels as experienced during the 2004 season.
- The **Idoch Water** shows little sign of the effects of dredging over the years but could the burn be more productive when left to restore the natural habitat?
- The **Upper Deveron and Blackwater** are supporting adequate salmon fry but could they be encouraged to be more productive? The habitat is relatively unspoilt and not damaged by agriculture or forestry but should we intervene in an attempt to increase production?
- The **Middle Deveron** burns appear to be in a reasonably healthy state except the Auchintoul near Marnoch which has been degraded by dredging. The offenders must be informed of the impact of this on salmon and trout.

RESULTS FROM THE 2006 ELECTRO-FISHING SURVEY

STREAM	REF:	GRID REF:	WIDTH METRES	LENGTH METRES	SALMON		TROUT	
					PER M2	PER M2	PER M2	PER M2
UPPER					0+	1+ - 4+	0+	1+ - 4+
BLACKWATER	BW1	3326/8245	3.3	50	0.48	0.09	0.48	0.12
BLACKWATER	BW9	3336/8284	6.3	21	0.37	0.18	0.27	0.04
MARKIE	Mk 9	3399/8388	3	28	0.55	0.19	0.86	0.31
SUCCOTH	Suc 1	3428/8358	1.5	30	0	0	0	0
GOULLS BURN	Goul 1	3419/8349	1	30	0	0	0.23	0.27
GLEN	G7	3478/8393	3	45	0.87	0.12	0.78	0.61
CALLANACH	Cal	3484/8398	1.1	43	0	0	0.42	0.21
BURN OF BANK	Bn 3	3384/8285	2.9	50	1.66	0.48	0.04	0.03
HILLOCK	Hk 1	3399/8325	1.68	65	0.74	0.23	1.62	0.35
ALLT DEVERON	A 7	3387/8245	4	33	2	0.52	0.22	0.06
DEVERON	D 5	3381/8285	7.7	35	3.64	0.71	0.04	0.03
MIDDLE								
AUCHINTOUL	Au 3	3612/8502	3.3	35	0	0.04	0.03	0.09
AUCHINTOUL	Au 4	3611/8520	3	55	0.03	0.01	0.3	0.1
CROMBIE	Cro 1	3592/8514	3	31	0.56	0.04	0.42	0.12
FORGUE	F 12	3597/8436	4.6	43	1.37	0.18	0.68	0.35
LOWER								
MONQUHITTER	M 15	3817/8523	3	45	0.13	0.06	1	0.3
IDOCH WATER	Id 9	3763/8489	4.6	25	1.5	0.03	1.36	0.14
KING EDWARD	Ke 1	3723/8563	4.6	39	0.62	0.11	0.54	0.07
FISHRIE	Fi 12	3744/8567	4.6	39	0.02	0.02	0.77	0.13

STREAM	REF:	GRID REF:	WIDTH METRES	LENGTH METRES	SALMON		TROUT	
					PER M2	PER M2	PER M2	PER M2
BOGIE					0+	1+ - 4+	0+	1+ - 4+
PRIEST WATER	P 2	3476/8347	1.5	27	0.3	0.15	1.14	0.25
PRIEST WATER	P 8	3494/8344	3.1	30	1.09	0.14	3.97	0.63
NESS BOGIE	P 12	3515/8359	4.1	40	3.81	0.43	0.65	0.32
TILLATHROWIE	Til 1	3468/8347	1	30	1.03	0.13	1.53	0.53
LAG	Lg 0	3440/8329	1.3	34	0	0	0	0.02
LAG	Lg 1	3452/8328	2.3	30	0	0	0.09	0.29
LAG	Lg10	3484/8342	2	30	0.38	0.18	7.35	0.88
LAG	Lg 13	3491/8343	2.1	40	1.61	0.05	2.47	0.75
BOGIE	B 1	3488/8245	4.4	50	1.76	0.11	1.61	0.21
BOGIE	B 18	3520/8293	5.9	28	1.29	0.26	0.65	0.14
BOGIE	B 36	3522/8351	10	37	3.76	0.35	0.25	0.04
BOGIE	B 46	3519/8375	11.4	48	1.08	0.03	0.08	0.02
KIRKNEY	K 10	3437/8295	3.1	23	0.63	0	2.05	0.2
KIRKNEY	K 18	3462/8306	4.4	25	0.04	0.11	1.1	0.18
KIRKNEY	K 28	3489/8318	5.4	24	0.52	0.1	1.29	0.19
KIRKNEY	K 39	3515/8336	5.3	35	2.81	0.37	0.58	0.1
EALACHIE	Ea 0	3437/8313	1.9	30	0	0	0	0.05
EALACHIE	Ea 6	3450/8306	3.1	40	0	0.09	3.3	0.09
BOGOTTEN	Bg 1	3435/8315	1.2	50	0	0	1.33	0.05
CRAIGWATER	CW1	3426/8310	1.8	30	0	0	0.3	0.02

STREAM	REF:	GRID REF:	WIDTH METRES	LENGTH METRES	SALMON		TROUT	
					PER M2	PER M2	PER M2	PER M2
ISLA								
ISLA	I 18	3408/8473	9.5	21	1.3	0	0.95	0.01
ISLA	I36	3434/8519	8	28	1.42	0.24	0.09	0.03
DRUM	Dm 7	3442/8496	2.6	30	1.42	0.02	2.97	0.09
CAIRNIE	Cr 9	3473/8447	4	39	0.46	0.03	1.68	0.12
BRACO	Bc 17	3491/8516	3.7	47	0.3	0.03	0.11	0.09
TOWIE	TOW 2	3383/8461	2.5	40	0	0.04	0.28	0.08
AULTMORE	Am 10	3458/8535	4.5	32	0.78	0.13	0.58	0.1
AULTMORE	Am 0	3457/8572	2.5	36	0	0	0.03	0.01
FERNKING	Fern 1	3454/8565	1.5	39	0	0	0.12	0.06
THIEVESBUSH	Thb 1	3455/8558	1.8	24	0	0	0.26	0
GARREL	G 1	3453/8549	2	32	0.02	0	0.71	0.09