

JEB

TRANSACTIONS
of the
WHARFEDALE NATURALISTS' SOCIETY
VOL. XI
JANUARY - DECEMBER 1956.

WHARFEDALE NATURALISTS' SOCIETY

Officers for the Session 1956-57.

President	E.S. Skinner
Vice-President	C.G. Booth
Hon. Secretary	Miss J.E. Bartle
Hon. Asst. Secretary and Librarian	Miss E. Gill
Hon. Treasurer	H.J. Williamson
Committee	Mrs. O.M. Pennock, Dr. K.C. Crosbie, A.C.M. Duncan, W.F. Fearnley, H. Marjoram.

Recorders

Botany	Miss J.E. Bartle
Vertebrates (other than birds)	H. Marjoram
Ornithology	W.F. Fearnley
Geology	P.D. Lamming

MEMBERSHIP

The total membership in March, 1956, was 99, the number including 91 ordinary members, 3 juniors, and 5 honorary members.

FINANCIAL POSITION

During the year 1955-56 there was a deficit on the year's working of £2. 7. 2d, and a balance in hand of £21. 3. 11d.

At the Annual Meeting in March, 1956, the subscription was increased to 10/- for ordinary members, remaining at 2/6d for junior members.

YORKSHIRE NATURALISTS' UNION

The Society has continued its affiliation to the Y.N.U., and members have supported the Union meetings and excursions.

YORKSHIRE NATURALISTS' TRUST

The Society is a member of the Yorkshire Naturalists' Trust.

DINNER

The Annual Society Dinner was held in March, 1956, and it was followed by a showing of members' slides and films. Nearly 50 members and friends attended.

THANKS

The thanks of the Society are due to all those who have helped to make the year's work a success, especially to visiting lecturers. The help given by the Editor of the Ilkley Gazette in publishing accounts of the lectures, and monthly reports from the records, has stimulated interest in the Society, and numbers and attendance have once more increased.

ROYAL SOCIETY FOR THE PROTECTION OF BIRDS

In the winter session of 1956-57 it was not possible to hold the usual showing of an R.S.P.B. Bird film, as the new one was still in preparation. It is hoped that this will be ready for next session.

WEATHER REPORT

For the first time the Transactions includes a weather report, so that the records may be correlated with weather conditions throughout the year. Thanks are due to the Ilkley Surveyor's Office for giving the Society access to the local weather records.

ARTHUR EDWARD PULLAN

At the Annual Meeting in March 1956, Mr. A.E. Pullan was elected an Honorary Life Member of the Society, in recognition of his services to Natural History in the Society, and in the district.

It was with very deep regret that members learnt of Mr. Pullan's sudden death on 19th December, 1956, for as a founder member, and serving on the Committee for several years, he was one of our oldest and most esteemed members. Right up to the time of his death he was a regular attender at the meetings, and came on many of the summer outings. In the early spring he would delight in looking for the first flowers to open, and this issue includes some of his early flowering dates. He was an excellent all-round naturalist with a wonderful memory and a fund of amusing anecdotes. Mr. Pullan gave pleasure to a great number of people who read his Nature Notes in the Wharfedale Observer and the Ilkley Gazette; he had the gift of writing with a charm and simplicity that appealed to everyone. We as a Society shall miss him very much.

SUMMER PROGRAMME 1956

		Leaders
April 24	(a) Geology	P.D. Lamming
	(b) Bird Song	E.S. Skinner
	Bolton Abbey	
May 1	Botany	Miss J.E. Bartle
	Ben Rhydding to Burley Woodhead	
May 8	Ornithology & General	W.F. Fearnley
	Askwith	
May 15	Ornithology	A.C.M. Duncan
	Bolton Abbey	
May 29	(a) Botany	Miss J.C. Salter
	(b) Entomology	H. Dobson
	Middleton Woods	
June 5	Botany	Miss J.E. Bartle
	Washburn Valley	
June 12	Geology & General	P.D. Lamming
	Troller's Ghyll	
June 19	Botany	Mrs. H.A. Robinson
	Ilkley Moor	
June 26	Botany	Miss J.E. Bartle
	Nessfield	
July 3	General	K.C. Crosbie
	Grass Wood	

WINTER PROGRAMME 1956-57

Oct. 2	The Making of the Matterhorn	R.J. Steel, M.B.E.
Oct. 16	Weather in the Making	Dr. F.A.B. Ward
Oct. 30	In Search of Mountain Flowers	Miss C.Shaddick, M.A.,
Nov. 13	The Birds of Flamborough	F. Brock, F.T.I.,
Nov. 27	Malham Moorlands	Miss H.M.Twigg, B.Sc.,
Dec. 11	Birds of the Farnes and Bass Rock	E.S. Skinner
Jan. 8	Birds of Britain	H.R. Lowes, F.R.P.S.,
Jan. 22	A Bird-Watching Trip to Gotland	R.F. Dickens
Feb. 5	Members' Slides and Recorders' Reports	
Feb. 19	The New Forest and its Butterflies	C.R. Haxby
Mar. 5	Camargue	G.K. Yeates, B.A., F.R.P.S., M.B.O.U.,
Mar. 19	Exhibition and Open Night	
Mar. 29	Annual Dinner	
April 2	Annual General Meeting.	

WEATHER REPORT

	JAN.	FEB.	MAR.	APR.	MAY.	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
<u>TEMPERATURE</u> degrees F.												
Highest maximum	50	51	60	58	70	77	73	69	71	63	55	54
Lowest minimum	22	12	25	27	31	35	44	39	38	31	25	25
Average	35	30	40	43	55	55	57	55	55	50	45	43
<u>WIND</u> force, number of days.												
8 or more	-	-	1	-	-	-	-	-	-	-	-	-
6 - 7	1	-	-	-	2	-	1	1	2	-	-	1
4 - 5	13	2	6	4	9	8	7	11	3	9	10	13
1 - 3	14	24	24	26	19	21	22	18	23	20	20	17
calm	3	3	-	-	1	1	1	1	2	2	-	-
<u>RAINFALL</u> number of days.												
.2 inches or over	10	4	4	2	2	6	8	11	5	4	1	10
Monthly average	4.75	2.24	1.42	2.79	1.12	2.48	4.55	6.94	4.43	1.70	0.71	3.74

Annual total 36.87 inches.

WEATHER REPORT (continued)

The year 1956 will long be remembered for its cold wet summer. The average temperatures for the summer months were remarkably low, the highest temperature attained in August being only 69 degrees. The autumn followed very mild right up to the New Year. The first frost came in October. December had only nine days with small amounts of frost.

March was notable for its gale on the first of the month, when Ilkley suffered much damage to roofs, and many trees were blown down in the district. The Washburndale plantations were severely damaged, there were places where every tree was blown to the ground, leaving a clear band fifty yards or so wide through the plantation. At one exposed place at Fewston the trees were snapped clean off at about five feet from the ground, so strong must the gust of wind have been. Harewood Park was another place where many fine old trees were blown over, much of the timber has since been made use of.

Rainfall gave a total for the year of 36.87 inches. This did not break any records, but it may be called a wet year. Both the spring and autumn were fairly dry, with a reasonable amount of sunshine.

A.C.M. DUNCAN

BOTANICAL SECTION

1956 was remarkable for the heavy flowering and fruiting of trees, following a year of high sunshine record. The big reserves of food stored during last year would be available for these good crops. In contrast the herbaceous plants with no special food store did not flower particularly well in the rather wet summer.

Amongst the trees notably full of fruit were beech, ash and holly. The ash keys remained on the trees long after the leaves, many trees still bearing them at the close of the year.

Early flowering dates

March 5	Celandine	A.E.P.
March 10	Coltsfoot, Butterbur, Barren strawberry	A.E.P.
	Alternate-leaved Golden Saxifrage.	A.E.P.
March 18	Opposite-leaved Golden Saxifrage, Dandelion	J.C.S.
April 1	Wood Anemone	J.C.S.
April 12	Moschatel	A.E.P.
April 19	Toothwort, Ground Ivy	A.E.P.

New Records

Ranunculus hederaceus (Ivy-leaved crowfoot)	Washburn Valley
Cardamine flexuosa (Wood bittercress) <i>W.D.</i>	Ilkley; Bolton Abbey
Stellaria palustris (Marsh stitchwort) <i>W.D.</i>	Washburn Valley
Stellaria nemorum (Wood stitchwort) <i>L.</i>	Washburn Valley
Rosa spinosissima (Burnet rose) <i>W.D.</i>	Grass Wood
Crataegus monogyna (Hawthorn) <i>W.D.</i>	Ilkley
Epilobium palustre (Marsh willowherb) <i>L.</i>	Ilkley
Primula variabilis (False oxlip) <i>W.D.</i>	Grass Wood
Callitriche intermedia (Water starwort) <i>W.D.</i>	Ilkley

New Records (continued)

Juncus effusus (Soft rush)	Ilkley
Juncus conglomeratus (Rush)	Ilkley
Luzula multiflora (Many-headed woodrush)	Ilkley
Carex demissa (Sedge)	Ilkley
Carex nigra (Common sedge)	Ilkley
Carex echinata (Star sedge)	Ilkley; Washburn Valley
Agrostis tenuis (Common bent grass)	Ilkley
Equisetum nemorum (Wood horsetail)	Ilkley, Washburn Valley
Dryopteris spinulosa (Narrow buckler fern)	Ilkley

Records received from:-

Miss J. Clarkson	A.E. Pullan
Miss M. Dalby	Miss J.C. Salter
Miss McLaughlin	

J.E. BARTLE
Recorder.

VERTEBRATE SECTION

Mammals seen:-

<u>Grey Squirrel</u>	One at Riffa on March 20th, May 24th, October 1st, November 10th.
<u>Stoat</u>	One at Riffa on March 7th.
<u>Weasel</u>	One at Riffa on February 4th, March 10th.
<u>Fox</u>	One at Weeton Whin on November 17th. One at Almscliffe Whin on December 1st. Two at Kirkby Overblow on January 26th
<u>Fox cubs</u>	Two at Rougemont near Weeton on October 13th. Two at Swindon, Kirkby Overblow on October 27th.

Reports of foxes indicate that they are as numerous as ever, dead animals examined show them to be in very good condition.

During June nests of the Common Field Vole were found in large numbers in the meadow grass.

A Badger sett at Stainburn appears to be still occupied.

H. MARJORAM,
Recorder.

ORNITHOLOGICAL SECTION

- Great Crested Grebe. Has been regularly noted on the Washburn Reservoirs, Farnley Lake and occasionally on Chelker.
- Little Grebe. Odd pairs have been seen on most sheets of water and on the river. Youngsters about one day old were seen on July 28th.
- Heron. On May 17th there were 5 occupied nests at Harewood, but many trees had been blown down. The keeper said there had been 7 nests.
- Pintail. There was a female in Denton Park on February 18th.
- Scaup. One female and two first winter birds were on Chelker on March 12th. They were joined by an adult drake on March 23rd. Three had left by March 28th.
- Red Breasted Merganser. One was swimming on Swinsty reservoir on November 4th.
- Goosander. 4 drakes were reported from Fewston on May 4th. There were 2 on Chelker on March 9th, and 1 on April 11th.
- Shelduck. There were 11 on Fewston reservoir on January 28th. Other reports included a female on Denton Lake on March 18th, one on Chelker on March 23rd, and 10 flying up the valley at Ben Rhydding on October 28th.
- Geese (Grey) 40 were seen flying over Langbar on January 5th. On one night in October members coming from the W.N.S. meeting heard Pink-footed Geese flying around overhead.
- Canada Goose. On May 13th 2 were on Marsh Ghyll and on May 21st 2 were on Denton Lake and 2 (possibly the same pair) were on Marsh Ghyll later in the same day. They have been seen regularly on Fewston & Swinsty reservoirs.
- Whooper Swan. 6 were noticed on Denton Lake on March 3rd, and seen there again on March 4th, 9th, 11th and 18th. There were 10 on Chelker on January 1st and 9 on Fewston on January 28th, one was found dead at Fewston in February after the reservoir had been frozen over for a few days. A post-mortem revealed that it died as a result of a coronary embolism.

Ornithological Section (continued)

- Mute Swan. A pair nested and hatched cygnets on Ilkley filter beds this year.
- Bewick's Swan. 5 were seen on Fewston Reservoir on December 30th.
- Hen Harrier. One was seen on Beamsley Moor on September 20th.
- Merlin. One was disturbed on the moor top near Burley Woodhead on March 25th, one was seen on Ilkley Moor on March 21st, and one at Barden on July 31st. On September 16th one was observed perched on a post near Denton Park Lake.
- Corncrakes. None have been reported in the district this year.
- Oyster Catcher. One was heard and seen flying over Ben Rhydding filter beds on May 4th, and two were seen at Riffa on June 27th.
- Lapwing. A flock of about 200 had already congregated near the river at Ben Rhydding on July 1st.
- Golden Plover. 130 were seen at Langbar on April 2nd, and 70, including some of the Northern race, on Langbar Moor on April 29th.
- Jack Snipe. George Edwards saw 3 near Ilkley filter beds on February 3rd.
- Woodcock. Roding was noticed at Riffa on March 26th, and also in Bolton Abbey woods on April 24th. There were 3 or 4 in Hebers Ghyll on April 17th.
- Curlew. Birds had arrived at Marsh Ghyll on March 9th. A juvenile was caught during the hours of darkness in a garden at Ilkley, kept in the garage overnight and released next morning.
- Whimbrel. 7 were seen flying over Addingham Moorside, calling as they flew, on August 26th. They were making S.W.
- Common Sandpiper. First record April 21st at Ilkley.
- Green Sandpiper. One was seen on the riverside near Ben Rhydding filter beds on July 24th, and later it was joined by another. One was seen in the same place from August 11th to 28th, and one possibly the same from September 3rd to 10th.
- Redshank. On March 7th there was one at Ben Rhydding filter beds and on June 31st 30 were there.

Ornithological Section (continued)

- Greenshank. 2 were seen on Ben Rhydding filter beds on August 9th one of them remained until August 14th.
- Dunlin. 4 were seen near the river on April 11th, and on various dates until April 29th at Ben Rhydding.
- Common Gull. There were 30 in a field on Otley Chevin on March 21st.
- Blackheaded Gull. A flock of 74 was seen near the river at Ben Rhydding on July 1st. There were more than 500 on Chelker on March 9th.
- Black Tern. One appeared at Ben Rhydding filter beds on September 5th and remained until September 9th.
- Common (or Artic) Tern. One was seen at Ben Rhydding gravel pits on July 15th, and another on September 29th.
- Little Tern. On September 25th, one was seen at Panorama reservoir dropping down to the water time after time, although this small stone-girt reservoir would appear a most unlikely place for it to find much food.
- Turtle Dove. One was seen at Riffa on May 1st, but the wood where it has been noted is being demolished.
- Cuckoo. First noticed on April 24th at Ilkley.
- Tawny Owl. One found its way down a chimney in a house in The Grove, Ilkley, and was in the chimney 2 nights before being released.
- Little Owl. Young hatched at Denton and Otley and were ringed in July.
- Nightjar. Churring was heard at Barden on June 8th, and a pair was flushed from open ground there on June 9th. A female was killed on the road in Denton Park on July 28th.
- Swift. First record on May 2nd at Otley, and by May 6th 34 birds were seen together at Ilkley. At the end of the season, about 100 were flying round Ben Rhydding filter beds on August 14th and only 3 on September 6th.
- Kingfisher. One was caught in 'B' trap and ringed on October 7th.
- Swallow. First seen on April 8th at Ilkley. Late dates are October 4th (Burley) October 8th (Otley) and October 14th (Fewston).

Ornithological Section (continued)

- House Martin. 15 at Ilkley on April 28th, last seen on November 10th (2 birds at Collingham).
- Sand Martin. First seen on April 12th at Ben Rhydding.
- Long-Tailed Tit. A pair were building on the railway embankment at Ben Rhydding on April 1st. A large flock was between the Toll Bridge and Hepper Carr on October 11th.
- Mistle Thrush. A nest found near Otley was quite low down, in a bush below the level of the road at the edge of a field.
- Fieldfare. On April 5th there was a flock of over 200 on Burley Moor. On 17th 250 were seen on Ilkley Moor and on the 18th 60 were counted flying over Hebers Ghyll.
- Redwing. Last noticed on Denton Moor, where there were 37 on March 31st. The first autumn arrivals noticed were on Ilkley Moor on September 26th.
- Ring Ousel. On March 25th birds were present on Burley Moor and Ilkley Moor.
- Wheatear. First record is of birds seen at Barden on April 2nd.
- Whinchat. Pairs have been reported from Askwith (May 6th) and Ravens Peak Blubberhouses, (May 13th).
- Redstart. First record comes from Riffa (April 18th) and last from Ben Rhydding filter beds (September 9th).
- Sedge Warbler. One was seen and heard on Ben Rhydding filter beds on May 10th, and one was seen at Denton Lake on September 16th.
- Blackcap. First observed on April 29th at Bolton Abbey.
- Garden Warbler. First sighted at Ben Rhydding filter beds on May 13th. One was singing at Tivoli on May 20th.
- Whitethroat. One came under notice at Ilkley on April 29th.
- Lesser Whitethroat. One was caught and ringed at 'B' trap August 19th.
- Willow Warbler. First noticed at Ilkley on April 11th. Last Ilkley record was of a bird at Denton Lake on September 16th but on December 16th H. Stembridge and H. Marjoram watched a bird which they feel certain was of this

Ornithological Section (continued)

species (there is just a possibility of it being a Chiff Chaff) at close quarters for a considerable time at Riffa. They were unfortunately unable to get a clear impression of the colour of the birds legs.

Chiff-Chaff.

On March 25th one was reported from Burley-in-W.Dale, and a bird was heard singing at intervals from September 23rd to October 1st.

Wood Warbler.

Had arrived at Riffa on April 11th.

Spotted Flycatcher.

There was one at the Ben Rhydding filter beds on May 13th.

Pied Flycatcher.

First seen at Bolton Abbey on April 21st, a bird which we ringed in 1955 nested this year in the same nesting box, and the nestlings were ringed this year.

Meadow Pipit.

There were 50 in a field near Ilkley filter beds on March 9th.

Tree Pipit.

Our first record is dated April 21st when the species was noted at Bolton Abbey.

Yellow Wagtail.

Identified at Ilkley on April 14th. Final view for the year was obtained on September 9th at Ben Rhydding filter beds.

Great Grey Shrike.

One was watched near Ben Rhydding filter beds on January 7th and one on February 11th.

Goldfinch.

There was a flock of 25 at Ben Rhydding on August 25th, and a party of about 12 remained near Victoria Avenue during the late autumn, feeding on thistle seeds.

Hawfinch.

One was seen at Askwith on July 1st.

Greenfinch.

70 were seen at Marsh Ghyll on March 9th.

Siskin.

We have had more records than for several years, including one of 10 siskins with 12 Redpolls on January 8th in Middleton Woods, 3 near the suspension bridge on February 26th and 60 to 80 in Grass Woods on a date in October. Other records have been received from Farnley Denton, Riffa and Esscroft.

Brambling.

One was seen with Chaffinches at Burley on February 24th.

Ornithological Section (continued)

House Sparrow.

A bird with white plumage frequented the area round Ben Rhydding Post Office during October.

Members contributing to these records are as follows:-

Mr. H. Adamson
Mr. C.G. Booth
Mr. Cornish
Dr. K.C. Crosbie
Mr. C. Duncan
Mr. W.F. Fearnley
Mr. W. Flesher
Miss E. Gill
Mr. G. Harrison
Mr. H. Marjoram
Mr. R.C. Parkinson
Mrs. O.M. Pennock
Dr. R. Proctor
Mr. A. Pullan
Mr. E.S. Skinner
Mr. H.J. Williamson

TRAP REPORT

During the year 1956 1,172 birds were ringed, 46 species were represented in this number; this is less than 1955 when 1,745 birds were ringed of 55 species, since our first trap was built in 1948 5,564 birds have been ringed, this total is represented by 75 different species. Three new species were ringed in 1956 namely, Kingfisher, Lesser Whitethroat and Lesser Black-backed Gull.

In addition to a large number of local recoveries, there have been several long distance ones; the most interesting are the following:-

Starling ringed Ilkley 8/1/56 recovered Scotton Nr. Catterick 1/8/56.

Lapwing (pull) ringed West End Nr. Pately Bridge 12/5/55 recovered Talais, Medoc (Gironde) France 18/2/56.

Lapwing (pull) ringed Fewston 26/6/55 recovered Sheephouse Nr. Bridgetown (County Wexford) Eire 1/3/56.

Lapwing (Juv.) ringed near Otley 22/5/54 recovered Santarem (Estramadur) Portugal 21/1/56.

Blackbird (Juv.) ringed Ilkley 17/6/56 recovered Appleby (Westmorland) 3/9/56.

Blackbird (Adult) ringed Ilkley 25/4/55 recovered Grest Asby Nr. Appleby (Westmorland) 22/4/56.

Trap Report (continued)

Lesser Black-backed Gull (Juv.) ringed Tarn Brook Fell 21/7/56 recovered Mehedia Nr. Port Lyautey, Morocco, North of Casablanca 31/12/56.

Curlew (pull) ringed near Bolton Abbey 22/6/56 recovered Overton Marsh, Morecambe, Lancashire.

The most interesting of the local recoveries are as follows:-

Species.	Ringed.	Recovered.
Chaffinch	23/12/51	24/11/56 in same trap.
Blackbird	4/7/52	22/11/53, 16/1/55, 4/2/56 same trap.
Great Tit	2/9/52	May, 1956 found dead.
Chaffinch	5/1/53	12/2/56
Blue Tit	5/2/54	12/11/55, 11/11/56 in same trap.
Robin	9/3/52	3/6/56 found dead near where ringed.
Blackbird	19/8/53 (Burley)	12/3/56 found dead at Burley.

W.F. FEARNLEY
Recorder.

WILDFOWL COUNTS

As in the previous years, a number of members of the Society have taken part in the National Wildfowl Counts, and the same waters have been visited at least once a month.

After the drought of 1955, the reservoirs were filling up very well by 1st January, and by the 15th of that month they were all nearly full. They remained in this state for almost the whole year, and the fact that they were full in August shows that a considerable amount of rain fell during the summer. Whether this had any effect on the numbers of wildfowl counted towards the end of the year, it is not possible to be certain, but the numbers were well below those of the last few years. The mildness of the winter has also, no doubt, had its effect on the movement of wildfowl.

Details from the counts as follows:-

MAILLARD About 190 recorded on Swinsty on January 1st, rising to 270 on 15th January, after which numbers fell gradually to a total of 9 on April 8th. About 240 were seen on Fewston on 29th January. Numbers remained very low until November 4th when over 100 were recorded on each of the 3 reservoirs, Lindley, Swinsty and Fewston, but they fell again in December.

TEAL Small numbers usually recorded on all waters. 200 were reported by A.F.G.Walker on Fewston on January 1st, and about 150 on Swinsty on January 15th. Denton Lake had 100 on February 12th. Towards the end of the year, numbers reached double figures on only one occasion 45 on Lindley on November 4th.

Wildfowl Counts (continued)

- WIGEON Not always recorded on all reservoirs. 50 seen on Swinsty on 15th January, 30 on Denton Lake on February 12th, 20 on Grimwith on March 11th, August 5th and December 31st.
- PINTAIL One Drake seen on Swinsty on January 1st and 15th. A pair was seen on Farnley Lake on March 11th. One each occurred on Lindley and Grimwith on November 4th.
- SHOVELER A pair was seen on Grimwith on April 8th. On November 4th 4 were recorded on Lindley and 3 on Swinsty.
- SCAUP No records for this year.
- TUFTED DUCK Recorded irregularly during the year. 42 were seen on Farnley Lake on March 11th. Seen on Fewston as follows:- 10 on September 2nd, 14 on October 7th, 13 on November 4th, 20 on December 30th.
- POCHARD Two seen on Lindley on January 15th. 5 recorded on Fewston on August 5th, 6 on Lindley on November 4th, and 27 on Fewston on December 30th.
- GOLDEN-EYE Usually recorded in small numbers on most reservoirs. 11 on Fewston on January 29th, 10 on Swinsty on November 4th, 15 on Fewston on December 30th
- GOOSANDER 2 on Fewston on January 1st. 5 on Swinsty on January 15th. 3 males and 7 females were seen on Swinsty on March 11th. No further records until 1 female was seen on Lindley on December 30th.
- RED-BREASTED MERGANSER One was seen on Swinsty on November 4th.
- SHELD-DUCK A small flock of 11 birds was seen to alight on Fewston on 29th January.
- CANADA GOOSE 34 were seen on Fewston on January 1st, and 33 remained there until January 29th. Numbers fluctuated there and 13 were recorded on March 11th, 8 on April 8th, 28 on August 5th, 16 on September 2nd, 10 on October 7th, and 36 on December 30th. On Grimwith reservoir, 2 were seen on April 8th, and 4 on August 5th.
- WHOOPER SWAN Three birds were seen on Fewston on January 1st and January 15th. 6 adults and 3 Immatures were seen on Fewston on January 29th.
- BEWICK'S SWAN A party of 5 were seen on Fewston Reservoir on December 30th. They were all adult birds.

E.S. SKINNER

GEOLOGICAL SECTION

In the course of the year members of the Society visited Bolton Abbey and Trollers Ghyll to study the Geology. The visit to Bolton Abbey was combined with an ornithological excursion but a small party inspected some of the fine geological features for which the place is famous. Of particular interest were the gravel quarry almost opposite the Pavilion Cafe, the extensive and distinct river terraces between the Cafe and the Abbey and the fault opposite the Abbey. The anticlinal folding below the Abbey was also seen. Some fossils were obtained from the steeply dipping shale beds exposed in the river bed.

The visit to Trollers Ghyll was favoured by exceptionally good weather; at any rate by the standards of Summer 1956. At the entrance to the Ghyll members were able to see the remarkable contrast between the rocks under Simons Seat and those of the Ghyll. This contrast is made apparent by the dissimilarity of the vegetation. The grits and shales of Simons Seat give an acid soil which supports bracken and its associates. The general colouration is brown. The cover to the limestone of the Ghyll region is green and usually a bright shade of green. This side by side occurrence of grit and limestone is here indicative of a fault of some size - a branch of the great Craven fault system. Incidentally the change in rock types is well illustrated in the walls to the fields in this locality.

In the Ghyll the structure was seen to be typical of limestone scenery; steep sides, sometimes overhanging, being evidence of erosion by solution of the country rock along joints. Some of the limestone was seen to be very fossiliferous - Productids being common, as usual in the Carboniferous Limestone. In the stream there were boulders of unusually coarse quartz pebble conglomerate derived probably from the base of the overlying grit.

Principally the Ghyll is interesting geologically as a locality where lead ore was formerly mined. The ore occurred with other minerals as subsequent infilling to open joints and the visitor to the Ghyll can see how the mineral has been won both by digging down from the surface and by adits driven at lower levels into the hillside. Examination of the old spoil heaps yielded, in addition to the brilliant silver coloured lead ore Galena, fine crystals of Fluorspar (Calcium Fluoride) and Calcite (Calcium Carbonate). No doubt other minerals could have been discovered if searching had been continued.

Mention has been made above of the stone walls to the fields in the Dale. Much has been written about Dales walls and there is no need to re-iterate the fact that they contain enormous quantities of stone and must have cost much in human labour. Geologically they are not without interest but, alas, not without their limitations. As the rock of which they are made has been exposed to weathering for perhaps centuries the contained fossils are often beautifully freed from the enclosing matrix. By contrast the fresh rock in a nearby quarry is so compact and seemingly so homogeneous as to appear devoid of fossils. For fossils to have their maximum value as indicators of the age of a rock they require to be collected from a definite horizon in a known locality. However if it be assumed that the men who built the walls would be prudent, or lazy, enough to obtain their stone from the nearest source to save carriage then the walls in any region may be studied as one looks in a shop window, to see well displayed samples of the goods that lie within.