

52
"METEOROLOGICAL MAGAZINE"

May - July 1944

AUG 1944

SIR NAPIER SHAW, LL.D., Sc.D., F.R.S.
on March 4th 1944

The 90th Anniversary of his Birthday.

To you, who did our early footsteps guide
Along the path where truth in beauty lies,
Encouraging with wisdom and with pride
Our struggles with the "Seasons" and the skies,
Greetings we send,
And with our greetings blend
Our homage to our master and our friend.

The fields where Geostrophic winds abound,
You, first, in lucid language open threw
To Europe's wondering Conclave, sitting round
The Table International, whence drew
Majestic powers
Of Observation Hours,
And Symbols clear of Rain and Sleet and Showers.

"Resilience" you erstwhile did proclaim
Had final word in Atmospheric Space.
Your own resilience has put to shame
All laggards in the Meteorologic chase.
Three score and ten
Defined the years of men;
But you produced your Manual after then.

Science and Art the ignorant declare
Are incompatibles in Nature's plan.
But you with vision show they both may share
The elevation of the mind of man.
A Drama fine
Of Weather you design,
And publish it when you are seventy-

Ten years ago you gave, to our delight
 Your Random Recollections of the March
 Of Meteorology, from out the night
 Of struggle, to the bright triumphal arch
 Of knowledge sure,
 A Beacon, not a Lure;
 An Incident in which was Eskdalemuir.

And now your years have reached four score and ten,
 God's providence, from perils of the sky
 Has kept you, as of old, it kept the men
 Who from the fiery furnace did not fly
 In Babylon,

When furious one
 Decreed how they should make their orison.

The "Seasons" still wait on the printers art
 To make the British Isles an open page
 To Meteorologists from every part,
 Who now begin to occupy the stage,
 Where new attack
 Prevents from growing slack
 Pursuit, begun by you five decades back.

"Resilience" you elsewhere did proclaim
 Had final word in Atmospheric Space.
 Your own resilience has put to shame
 All laggards in the Meteorologic chase.
 Three score and ten
 Defined the years of men;
 But you produced your Manual after them.

Science and Art the ignorant declare
 Are incompatible in Nature's plan.
 But you with vision show they both may share
 The elevation of the mind of man.

A breeze fine
 Of weather you design,
 And publish it when you are seventy-nine

SEVERE FROST AND EXCEPTIONAL HEAT IN ENGLAND

ON MAY, 1944.

Once again we are reminded of the extreme variability of the English climate in May. On the 4th. temperature in the screen fell below freezing point at a number of places and on the 7th. screen frost was widely reported, very low temperatures for the time of year being reached in some localities. In parts of southern England these severe conditions persisted on the 8th. and 9th. and fruit crops and early vegetables were badly damaged, the fruit area of Kent suffering severely. The damage was so great that the Minister for Food consented to revise the prices fixed for certain soft fruits and stated that all the available black currants would now be held for puree. Another cold spell occurred from the 14th.-23rd. and low night temperatures were again registered at times within this period, for example, on the morning of the 15th., 19th. and 22nd. At numerous stations screen minimum temperatures of 30°F. or below were registered on as many as four to six

mornings in the month. Grass minimum temperatures were also very low, a notable reading being 99°F. at Goudhurst, Kent on the 8th. The table below gives the recorded values of screen minimum temperatures of 27°F. or below.

May 4	OF	May 7	OF	May 8	OF
Santon	24	Durham	27	Norwich	27
Downham		Houghall	27	Sprowston	27
		Santon	25	Ipswich	27
		Downham	22	Santon	22
		Luton	26	Downham	27
		Woburn	25	St. Albans	27
		Kings	27	Earls	26
		Langley	26	Colne	26
		St. Albans	26	Halstead	26
		Sutton	27	Maldon	27
		Bonington		Writtle	25
		Raunds	27	Enfield	27

/Coventry

May 4	May 7	May 8
Coventry 27	Farnham 27	
Stratford 27	Milford 24	
-on-Avon 26	Preston 26	
Aylesbury 26	Kent 24	
Droitwich 25	E. Malling 24	
Worcester 27	Goudhurst 24	
(Perdiswell) 27	T. Wells 27	
Farnham 27	Wye 27	
Milford 23	Horsham 26	
Goudhurst 27	Bodiam 26	
Horsham 26		
Reading (Seed 27		
Trial Grounds) 26		
Bramley 26		
Marlborough 26		
W. Lavington 26		
Rhayader 27		
May 9	May 15	May 22
Milford 26	Santon 25	Droitwich 25
Canterbury 27	Downham 27	Worcester 27
Preston 24	Milford 27	(Perdiswell) 27
Kent 26	Kent 26	Marlborough 27
E. Malling 26	Horsham 26	W. Lavington 27
Goudhurst 25	Bramley 27	
Wye 26	Marlborough 26	
Horsham 27		
Bodiam 25		
Totnes 27		

This frost was reminiscent of the severe frost of May, 1935 described in the June number of the Meteorological Magazine, 1935, p. 105 under the title "The Severe Weather of May 12th.-19th., 1935". In this article other cold May spells are mentioned, for example those in the first parts of May 1876 and 1877, May 15th., 18th. 1891, the first seven or eight days of May 1892,

HEAVY RAINFALL OF MAY, 29th, 1944.

Note on the Pressure Distribution on May 28th.

During most of the day the pressure over England was fairly uniform in a col between two anticyclones. While the surface winds were light and variable the general gradient was favourable for winds from between east and south at 2,000 feet altitudes while at greater heights than this the wind drift was from the south-west. By 18H. G.M.T. a very shallow depression shown by a loop in the isobars had developed over the north Midlands. Observations of upper air temperature indicate a fairly rapid decrease in temperature above 2,500 feet. Surface temperature rose to a high level during the afternoon.

More than 1 inch of rain for the rainfall day May 29th, 1944, occurred to the north of Burton-on-Trent, to the west of Chesterfield, to the east of Manchester and near Clitheroe. These areas of heavy rain were separated by localities with little or no rain typical of the thunderstorm type of distribution. It was only in the area to the east of Manchester that the intensity was abnormal.

There was more than 1 inch to the east of Manchester from Hayfield in North Derbyshire to Meltham, north-west of Holmfirth in Yorkshire, over an area about 16 miles long and 10 miles wide. A narrow belt extending nearly from Hayfield to Meltham recorded more than 2 in. with more than 3 in. in the northern part between Glossop and Holmfirth.

The largest daily amounts so far reported are:-

	in.
Manchester W.W. (Rhodes Wood Reservoir)	3.10
Stockport W.W. (Kinder Filters)	2.62
Manchester W.W. (Woodhead Reservoir)	2.00
Ashton-under-Lyne W.W. (Chew Mount Reservoir)	1.62
	/Meltham

in.
 Meltham (Nether End) 1.59
 Stockport W.W. (Hollin Head) 1.58

At Bilberry Reservoir (Huddersfield W.W.) it is estimated that the amount was between 3.5 and 4 inches: A total of 2 in. is estimated for the 29th at the United Thread Mills, Royd Edge, Meltham.

Thunder began about 13h. in the Meltham district and about 14h. 15m. near Holmbridge but the sudden and intense rain is given generally from about 15h. lasting for a period of 1 to 2 hours. At Rhodes Wood the observer reported 3.05 in. in 2 hours from 15h. to 17h. and the autographic gauge at Woodhead shows 1.94 in. in 2 hours from 15h. 37m. to 17h. 37 m. while that at Arnfield reservoir (Manchester ...) recorded 1.16 in. in 73 minutes from 1505h to 1618h. The gauge at Kinder Filters gave a fall of 2.55 in. in 73 minutes from 1606h. to 1719h. At Burbage (Sheffield W.W.) to the south-east of the area a fall of .44 in. was recorded in 5 m.

The falls at Rhodes Wood and Kinder Filters rank as "Very rare", the Woodhead fall is "Remarkable" and those at Arnfield and Burbage are "Noteworthy" according to the classification of heavy falls in two hours or less, introduced by Mr. Bilham in "British Rainfall" 1935.

At Bilberry Reservoir heavy rain commenced about 14h. 15m. and continued without interruption until 16h. 30m. During the period 15h. to 17h. the rain is described as falling as a solid sheet of water with the flood water rushing down the hillside, having no regard to the recognised water channels and ripping up roads in its course. In places the roads were washed away to a depth of 6 to 7 ft. So far as can be estimated between 3.5 and 4.0 inches fell there during the storm and from 15h. to 16h. there was not less than 2 inches of rain.

Flooding in the Meltham, Holmfirth and Holmbridge Glosseop and New Mills district were considerable and the following accounts from observers and newspapers are of interest.

The observer at Royd Edge Mills, Meltham recorded that flooding commenced in the Royd Edge Valley at /about

about 16h. (G.M.T.) the stream rising and flooding the works to a height of 5ft 5in. He adds that little or no rain fell in the Meltham Valley.

From the "Huddersfield Daily Examiner" and "The Times" come accounts of the disastrous flooding in the Holme Valley, in which a man and two women lost their lives and there was great damage to property. At Holmbridge where water pipes were smashed and a sewer fractured; two torrents of water from the uplands, converging, broke the parapet walls and flooded the town. In its course down the valley towards Holmfirth several business premises were partly demolished and bales of raw material washed away by the flood. As the water neared Holmbridge it had risen to 8 ft. and much damage occurred in the town. Two shops and the premises of two banks collapsed into the river, cars and goods were transported some distances and roads were extensively damaged throughout the area.

At Glossop "The Times" reports that every part of the town was flooded, a woman was drowned when a small bridge gave way and at least one house collapsed, while people were obliged to take refuge in upstairs rooms until the flood subsided.

To the south of the region of heavy rainfall near Hayfield and New Mills in north Derbyshire, similar damage occurred but no lives were lost.

In places the roads were washed away to a depth of 6 to 7 ft. so far as can be estimated between 3.5 and 4.0 inches fell during the storm and from 1.5 to 1.8 inches there was not less than 2 inches of rain.

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The observer at Royd Mill, Meltham recorded that flooding commenced in the Royd Mill Valley at

The following note has been contributed by
Mr. J. W. Baggaley of Sheffield:-

"On 29th May 1944, between 17.45 and 21.30 G.M.T., heavy thunderstorms occurred in the Sheffield District. At this Station rain only accompanied the thunder and lightning, but in certain suburbs the storm was characterised by exceptionally heavy falls of hail.

I was at home at Fulwood, $2\frac{1}{2}$ miles W. of this station when hail fell from 17.45 to 18.00 hrs. G.M.T. The hailstones mainly of large clear ice, $\frac{1}{2}$ inch to 1 inch in diameter, shape irregular, descended copiously with great violence, bouncing from the ground to a height of 3 feet. They cut leaves and tender twigs from the trees and riddled the large leaves of rhubarb, tearing them to shreds. Damage was caused to fruits (gooseberries, pears, currants, etc.) which were severed from the trees and bushes during the downfall. Four hours after the hail had fallen, some of it under shrubs had not thawed.

Similar falls of hail to the above are reported occurring at the same time in other areas around the city, N.W. W. and S. Flooding occurred in parts and sewer manholes were forced out of position."

New Facts in Meteorology

Mr. S. E. Ashmore forwards a note of the hailstorm in London:-

"I am sending word of this hailstorm lest you may not have heard of it, although it occurred in London. The observer was Mr. F. N. Cheetham, who is an old pupil of mine, and can be relied on to give proper account. He was at Long Lane, Bermondsey, on May 29 last, at 1630 G.M.T. Hail commenced, and sounded like "a crowd of boys throwing stones all over the place". The stones were the size of marbles, and hit him with a real sting and the streets were emptied of people at once. The hail soon was accompanied by heavy rain, and the

The following note has been contributed by
size of the stones became a little smaller: the storm
lasted about ten minutes.

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heavy thunderstorms occurred in the Sheffield District.
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lightning, but in certain suburbs the storm was charac-
terised by exceptionally heavy falls of hail."

Corrections to

A note on the maximum falls at
Garden Square.
The hailstones mainly of large clear ice, 1/2 inch to 1
with reference to the note in the magazine for
March-April 1944, the last sentence should read:
the maximum rainfall to be expected in any one year
is equal to half the maximum once in 100 years.
multiplied by 1 plus the logarithm of γ .

The fifth paragraph should read: These can be
represented approximately by the expression
 $R(\text{ins}) = \frac{1.22}{\gamma} + 1.07 \log \gamma$ where γ is the length of the
section in years.
occurring at the same time in other parts of the
city, W. and S. flooding occurred in parts and
sewer manholes were forced out of position.

New Facts in Meteorology.

We extract the following, without apology, from
a recent popular book on Meteorology.

"There is an increase in deflective effect of the
earth's rotation near the North Pole... For this reason
northerly air routes are more favourable for aviators."

"Cyclostrophic effect in wind". This is the
deviation of its flow further from the curved path
through the gyroscopic properties of the air mass.
Lightning

"Lightning travels to earth at the amazing speed of 186,000 miles per second."

"Rainfall is greater at high altitudes. This is caused by the air coming into contact with the cold surfaces of these higher regions."

"No two snow crystals are ever alike. When one considers the millions of crystals that fall in a snowstorm, this is an amazing feat of nature."

"A satisfactory type of rainfall gauge is a brass tube of just over two inches diameter inside an eight inch cylindrical can."

"In war-time, weather maps are not made public until nearly two weeks later".

"Normally, in temperature latitudes, the stratosphere begins at about 37,000 feet above sea level (about 7 miles) but storms have been recorded by radio-meteorograph balloons as high as 12 miles (approximately 5 miles above the recognized "weather" station, where clouds cease to penetrate). When a storm "lifts" the stratosphere as much as this, it tends to affect the subsequent weather below very considerable".

"The aviator is bound to take into account the problem of cosmic rays, from the point of view of high-altitude flights. The atmosphere which surrounds the earth protects us from the terrific force of cosmic radiation within the troposphere, but when the high altitudes of the stratosphere are penetrated these cosmic rays may be of such force that both man and his machine would be crushed to death before there was time to realize the fate in store."

On February 28th, 1944, temperature was unusually low at the morning observation hour, but rose during the day; there was a slight fall again during the following night, but the minimum during the night was not nearly so low as the 0th temperature on the previous day. Therefore the minimum attributed to

The Snowstorm of February 27, 1944

Woodthorpe, Notts.

A snowstorm of exceptional severity for here occurred on Feb. 27, 1944.

It began early in the day (about 3 inches lying at 1000 hrs. B.S.T.) and continued till evening when 16 in. of undrifted snow were lying. Drifts in the garden and road were from two to three feet deep. The rainfall measurements were: - 1000 hr. B.S.T. on 27th 0.33 in.; 1000 hr. B.S.T. on 28th 1.37 in.

This is the greatest fall I have seen in Nottingham, but a similar amount lay on the ground after the great storm of January 1940, when I measured 16 inches, but the fall was spread over two days.

I understand there was a rapid fall-off in depth south of Nottingham.

Arnold B. Minn.

A March record contributed by

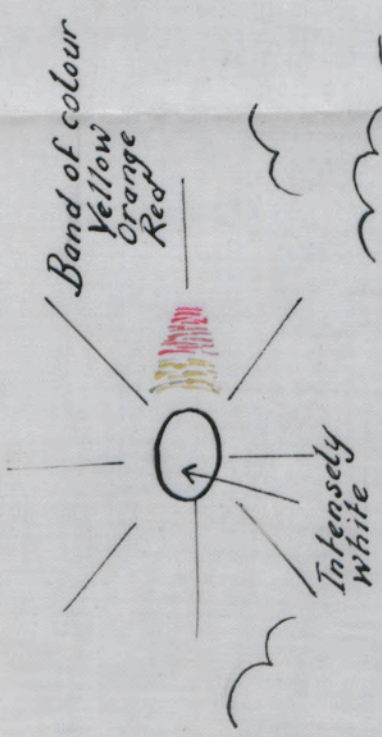
February.

A curious anomaly arose in March 1944 out of the procedure obtaining climatological stations, where the screen minimum thermometer is read at 0900 G.M.T. The minimum refers to the 24 hour period ending at 0900 G.M.T. as it usually occurs about sunrise, it is allocated to the day of reading.

On February 29th, 1944, temperature was unusually low at the morning observation hour, but rose during the day; there was a slight fall again during the following night, but the minimum during the night was not nearly so low as the 0900 temperature on the previous day. Therefore the minimum attributed to

Mock sun

Sun shining through
very thin strata of cloud



Mock sun

Flocculent white clouds forming over the land

S-W

W

N-W

Moor

Forge Valley

Scalby Nabs

Hay Brow

Phenomenon viewed from Scalby N^r Scarborough.

Date: Sat. 1st April, 1944.

Duration: First observed 3.30 p.m. (Summer time)
Ended 4.45 p.m.

March 1st really occurred at or near 0900 on February 29th. As this temperature was unusually low, we have at individual stations the strange case of the lowest minimum temperature reported in March for many years, not really occurring in March at all.

Mr. A.B. Tinn of Nottingham writes:-

"On February 29, 1944, my minimum thermometer in standard screen read 9.3°F. The temperature was about 12°F. at 1000 hr. (B.M.T.) and so my minimum showed 11.8°F. for March 1st, which is an anomaly. This reading of 11.8°F. is virtually a record for Nottingham in March; which seems rather absurd as it occurred in February".

Mock suns observed at Scarborough on
1st April, 1944.

The accompanying diagram is contributed by Mr. J.C. Hedley, with the following noted.

"The upper strata of cloud appeared to be at a great height - far above the vapour trails of high flying aircraft.

The vapour trails drifted to the south indicating a northerly wind at high level.

The ground breeze was S.E. - from the sea, giving way to S.W. at dusk.

Overhead, and to the east, the tenuous upper strata of cloud was breaking off and forming 'saucer' tails"

The day was dry, bright and very cold - the last one of a long spell of dry and cold weather.

/The

The bands of colour were composed of three colours of the spectrum, yellow, orange and red with a trace of violet edging the red.

The sun was very bright and the phenomenon was continuous between the observed times.

Mock suns were of equal brightness, but much less bright than the sun.

Brightness of mock suns varied according to thickness of clouds drifting across near earth.

Finally obscured by grey clouds at 4.45 p.m. (3. Time).

There was a definite reduction in width of each band of colour, the yellow being the wider and the red the narrower".

Mock suns observed at Northborough on 1st April, 1944.

Halo phenomena observed at Amesbury on May 7th, 1944.

The A.O.C. here, Air Commodore D'Arcy Greig, has described to me how he saw what appears to have been a 120° mock sun in a partial circumzenithal circle from his home at Amesbury at about 0900 G.M.T. on 7th May, 1944. The remarkable feature was that broad shadows in the form of sloping bands moved across the bright region at irregular intervals.

The observation was confirmed by his wife and was also noticed by another senior officer from Boscombe Down at about the same time.

I can find no reference in any of the literature here to anything but static halo phenomena and I have never seen anything of this sort myself.

The most reasonable explanation offered so far is that it was due to heavy artillery fire at Larkhill which is about 3 miles away. This is reasonable, as Air Commodore D'Arcy Greig estimated the speed of the shadows across the cirrus as 500 - 1,000 m.p.h.

Air Commodore D'Arcy Greig has asked me if I can find any authoritative explanation and suggests that the phenomenon should, in any case, be put on record.

A.W.Brewer.

(Note: No reference to a similar phenomenon can be traced. The description suggests that the crystals responsible for the mock sun were subjected to some form of wave motion which affected their *orientation* at *interventions* - Ed).
intervals.

Cloud formed over the smoke trail
of a moving vessel.

The accompanying photograph is contributed by S/Ldr. R.A.Buchanan who writes as follows:-

The captain of the aircraft concerned states that during his escort to the ship, a cloud fragment, base about 1200', formed repeatedly over the smoke-trail, lasted for 5-10 minutes and then dispersed. This happened about three times per hour.

Aircraft operating in the area throughout the day gave average conditions as 1/10-3/10 base 1200-1300', tops mainly under 2000', but occasionally 2500'. The temperature at 1800' was given by several aircraft as 68°F.

From the 1800Z chart on that day, it would seem

/reasonable

RR.293/Y.



reasonable to assume a surface dew-point of 64° , and a surface (free-air) temperature of $67-68^{\circ}$, giving a condensation level of about 1000', there being a marked inversion above, as indicated by the temperature of 68° at 1000'. Sea temperature can be assumed at $65-66^{\circ}$ of the location; whilst, from the photo, it looks as if the captain of the aircraft was certain that the formation of the cloud shown in the photograph was due to some effect from the ship, and suggested the heating from the funnel as a trigger action.

The Green Flash observed over the Atlantic.

I have recently received a letter from Professor Sir Geoffrey Taylor in which he refers to an observation of "green flash" which he made while crossing the Atlantic by air. The following passage is taken from his letter:

"I saw a very fine green flash as the sun went down behind a huge sheet of cloud extending apparently from miles east of Newfoundland to near Ireland. I had hardly expected a cloud so to have a sufficiently definite top to show the green flash, but it was really fine display".

It also has an alarm and repeater mechanism. It is also a small knob on the top of the clock, strikes the last hour and quarter hour. The movement is contained in a gilt case with bevelled glass panels and carrying finely chased steel figures. It was purchased by the Meteorological Office by a daughter of the Admiral, Miss Anne Fitzroy, who has recently died.

It is proposed to place the clock in D.S.O.'s room when calmer times prevail, but still then it

Note on the photograph of orographical cloud in Met. Mag. March-April, 1944. The photograph of orographical cloud over Fitful Head, Sumburgh, gives a misleading picture of the location; whilst, from the photo, it looks as though the cliffs rise from a low coastal plain, in actual fact they rise straight out of the sea. to some effect from the ship, and suggested the heading . . . as a trigger action.

The Green Flash observed over the Atlantic.

I have recently received a letter from the Meteorological Office. The Meteorological Office has received an interesting memento of its first Director, Admiral Fitzroy (1855-1865). It is in the form of a clock which was presented to Admiral Fitzroy by the Minister of Marine and Colonies of France in recognition of his services to the French Imperial Navy. The clock is a small one, but it is a fine specimen of French workmanship. In addition to the ordinary dial, the clock has subsidiary dials indicating the day of the week, day of the month, and month of the year. It also has an alarm and repeater mechanism, which, on pressing a small knob on the top of the clock, strikes the last hour and quarter hour. The movement is contained in a gilt case with bevelled glass panels and carrying richly chased steel figures. It was bequeathed to the Meteorological Office by a daughter of the Admiral, Miss Laura Fitzroy, who has recently died.

It is proposed to place the clock in D.M.O.'s room when calmer times prevail, but until then it

is being sent to Stonehouse for safe custody.

(Note: Miss Fitzroy bequeathed to the Royal Meteorological Society a marble bust of Admiral Fitzroy. It is unsigned and undated but represents the Admiral in early middle life).

Joint Red Cross War Organisation that a number of requests for meteorological literature had been received from prisoners of war. To meet this need the Council, besides presenting three copies of "Some problems of modern meteorology" to members of the Society, also presented an appeal for suitable second-hand books to be sent to the Meteorological Office.

The following awards to members of the Meteorological Office are announced:-

initiated by a Committee of the Society. The office was opened to purchase new and modern meteorological publications. The books, of which a number have been dispatched through the Red Cross Society before the end of the year, were chosen by Mr. J. B. Bines, who at the request of the Council, has kindly undertaken supervision of the office.

Other awards of interest are:-
Prof. G. I. Taylor, F.R.S. - Knighthood.
E. E. Diggory, Clerk to the Wye Catchment Board. - O.B.E.
P. O. Moon, formerly of the Bournemouth Gas and Water Co. - O.B.E.

In a recent letter Mr. J. B. Bines, F.R.S., has notified his intention to resign his position as Clerk to the Wye Catchment Board. Both Mr. Diggory and Mr. Moon have contributed to the office. It is now in his hands to determine the future of the office. An unbroken daily rainfall record at Bournemouth since 1899. A letter has first commenced there in June, 1909. A letter of appreciation has been sent to this observer.

Meteorological Literature and Instruction
for Prisoners of War.

The following note from the Journal of the Royal Meteorological Society may be of interest to readers.

"Early in the year the Council were informed by the Joint Red Cross War Organization that a number of requests for meteorological literature had been received from prisoners of war. To meet this need the Council, besides presenting three copies of "Some problems of modern meteorology", published in the Quarterly Journal an appeal for suitable second-hand books no longer needed by members. Later, a fund initiated by a generous donation from Mr. Ian Kirkpatrick was opened to purchase new and modern meteorological publications for use at the prison camps in Germany. The books, of which about 60 had been dispatched through the Red Cross Society before the end of the year, were chosen by Mr. J.S.Dines, who at the request of the Council, has kindly undertaken supervision of the prisoners' meteorological studies."

A long series of rainfall observations.

In a recent letter Mr. J. Mallender, F.R.H.S. of Scrooby, Nottinghamshire, has signified his intention of terminating his rainfall station. Mr. Mallender, who is now in his hundredth year, has maintained an unbroken daily rainfall record at Scrooby since readings first commenced there in June, 1909. A letter of appreciation has been sent to this observer.

C.M.

The Mackinnon of Mackinnon.

It was with much regret that we learned of the death of the 96th birthday of Francis Alexander Mackinnon, D.L.J.P., the 35th Chief of Glen Mackinnon, of Drumduan, Forres, Morayshire, who has maintained a rainfall station for 66 years. A letter of appreciation for the records contributed to the office has been sent by the Director.

William Colles Finch.

Obituary.

The death is announced of Mr. A.W. Clayden on February 21st, 1944 in his 69th year. He was a Fellow of the Royal Meteorological Society from 1886 and formerly a Councillor.

He was a man of wide and varied interests; perhaps the chief of these was photography and meteorology. When in 1890 the British Association set up a committee to advise and report on meteorological photography Clayden was then honorary Secretary.

He designed an actinograph for recording the day-to-day variations of incoming radiation from the sun and the sky and in 1899 exhibited at the Royal Meteorological Society and at the Royal Society a model designed by himself for illustrating the formation and turmoil of ocean currents.

Clayden's "Cloud Studies" published in 1903 and revised in 1925 is deservedly well known and contains the first set of cloud photographs taken up to 1903.

John Dyke Acland.The Mackinnon of Mackinnon.

It was with much regret that we learnt from a notice in "The Times" of the death on April 24th, 1944, of John Dyke Acland, at his home Lynch Mead, Allerton. Mr. J. Dyke Acland first set up a rainfall station in 1903 at Bossington and in 1907 moved a short distance to Lynch Mead, near Porlock, where observations have been made without a break ever since. Miss E. M. Dyke Acland, a daughter of the deceased has kindly arranged for the rainfall record to be continued by the gardener on the estate.

William Coles Finch.

It is with much regret that we learn of the death, which occurred at Chatham on June 6th, of Mr. William Coles Finch at the age of 79. Mr. Coles Finch was formerly Engineer to the Chatham and District Water Company and retired in 1938 after 43 years service with the Company. That year also marked the completion of 40 years co-operation with the British Rainfall Organization in its work of collecting reliable rainfall records. He devoted a lifetime to the study of water and was the author of several books on the subject, notably "Water - Its origin and uses".

Mrs. W.A. Milner.

It is with much regret that we have learnt of the death of Mrs. W.A. Milner, O.B.E., who has maintained a rainfall station at Baslow, near Bakewell, since her husband's death in 1933. Previously a rainfall record had been kept by Mr. Milner at Totley Hall, Sheffield.

An interesting point is that during the whole of the period from 1899 to 1943 the actual readings were made by the same gardener, Mr. D. Lewis. A letter of appreciation has been sent to Mr. Lewis.