practically the warmer waters of Station viii., released from the superincumbent colder layer; that is to say, we have at 20 m. $8^{\circ}6'$, at 100 m. $8^{\circ}4'$, at 200 m. $7^{\circ}85'$ and at 300 m. $6^{\circ}91'$. At Stations x. and xi., the water cools very slowly downwards, from $9^{\circ}6'$ to $8^{\circ}8'$ at 170 m. and from $9^{\circ}3'$ to $7^{\circ}8'$ at 360 m., respectively. At Station xii., in shallower water, we have readings to 100 m., practically identical with those to the same depth at Station xi., further to the north.

The records along the next two lines, those crossing the Faeroe Channel, deserve to be given in detail.

Faeroe to Shetland (xvi.-xii.)

Depth in Metres.	xvi.	xv.	xiv.	xiii.	xii.
Surface.	$7^{\circ}9'$	$7^{\circ}5'$	$9^{\circ}5'$	$9^{\circ}5'$	$9^{\circ}2'$
100	$7^{\circ}6'$	$7^{\circ}45'$	$8^{\circ}8'$	$8^{\circ}9'$	$8^{\circ}9'$
200		$7^{\circ}51'$	$7^{\circ}72'$	$8^{\circ}9'$	
300		$6^{\circ}81'$	$7^{\circ}6'$	$8^{\circ}9'$	
400		$3^{\circ}2'$	$5^{\circ}56'$	$8^{\circ}7'$	
500		$1^{\circ}38'$	$2^{\circ}12'$	$7^{\circ}9'$	
600		$0^{\circ}4'$	$0^{\circ}34'$	(at 460 metres.)	
700		$-0^{\circ}2'$	$-0^{\circ}25'$		
800		$-0^{\circ}48'$	$-0^{\circ}45'$		
900		$-0^{\circ}65'$	$-0^{\circ}65'$		
1000			$-0^{\circ}7'$		
1100			$-0^{\circ}8'$		

Ditto (Southerly Course) and on by Fair Isle to $0^{\circ}2''$ E.

Depth.	xvii.	xviii.	xix.	xx.	xxi.	xxii.
Surface.	$8^{\circ}0'$	$7^{\circ}6'$	$6^{\circ}9'$	$9^{\circ}3'$	$8^{\circ}0'$	$8^{\circ}2'$
100	$7^{\circ}9'$	$7^{\circ}53'$	$7^{\circ}69'$	$9^{\circ}9'$	$8^{\circ}6'$	$7^{\circ}54'$
200	(80 m.)	$7^{\circ}55'$	$6^{\circ}8'$	$9^{\circ}0'$ (at 150 m.)		
300		$7^{\circ}59'$	$4^{\circ}28'$			
400		$6^{\circ}9'$	$0^{\circ}5'$			
500		$1^{\circ}62'$	$-0^{\circ}25'$			
600		$1^{\circ}72'$				

The first of these two tables corresponds as closely as possible with that given by Mr. Helland-Hansen for the August cruise in the note to NATURE already quoted. The most striking differences will be found to be that below 300 metres the temperature is now much higher at Station xiv., and at 400 m. it is now much lower at the more westerly Station xv. This means that the cold wedge is now considerably further to the westward and probably also of less vertical extent. In the more southerly section (Table II.), the cold wedge is seen, of great intensity, at Station xix. It is to be regretted that the next station (xx.) to the eastward of xix. is a shallow-water one, and still more to be regretted that we have no deep-water station to the westward of Station xv.

I have hastened to publish these few preliminary notes in the belief that many are interested in the progress of the work, and because we shall have long to wait until the full data are available and the final deductions are drawn by competent hands.

D'ARCY W. THOMPSON.

Dundee, December 29, 1902.

The Quadrantids of 1903.

OBSERVATIONS were made at Hampstead Heath on January 1, 3 and 4 for the Quadrantid meteors. During a combined watch of six hours, 57 meteors were seen, distributed thus:—

	h.	m.	h.	
Jan. 1	...	11 55 to 14	...	18 meteors
3	...	14 0 to 16	...	29 "
4	...	15 0 to 17	...	10 "
Total	...	...	...	57

The paths of 10 only were registered, which I append as follows:—

NO. 1733, VOL. 67]

Date.	Time.	From		To		Mag.	Remarks.
		R.A.	Decl.	R.A.	Decl.		
Jan. 1	h. m.						
"	12 5	$210^{\circ} + 50'$		$130^{\circ} + 40'$		2	Sl. stk.
"	12 21	$240^{\circ} + 45'$		$247^{\circ} + 35'$		1	" "
"	12 39	$217^{\circ}5' + 43'$		$185^{\circ} + 30'$		2	Sw. stk.
"	1 10	$211^{\circ} + 29'$		$195^{\circ} + 10'$		2	Sl. stk.
" 3	14 5	$197^{\circ} + 33'$		$182^{\circ} + 23'$		1	" "
"	14 16	$195^{\circ} + 40'$		$165^{\circ} + 30'$		1	" "
"	14 33	$225^{\circ} + 50'$		$226^{\circ} + 51'$		3	Sl. streakless.
" 4	15 59	$215^{\circ} + 49'$		$170^{\circ} + 43'$		1	Sl. stk.
"	16 7	$220^{\circ} + 27'$		$213^{\circ} + 15'$		2	" "
"	16 14	$196^{\circ} + 30'$		$150^{\circ} + 9'$		1	Sw. stk.

Sl. = slow, Stk. = streak, Sw. = swift.

25 Holford Square, G. MCKENZIE KNIGHT.
Percy Circus, W.C., January 11.

Sun-spots and Summer Heat.

Is not a connection between these rather distinctly suggested by the enclosed curves?

A is obtained from sums of the sun-spot figures (mean daily area) in the thirty years ending 1861, '62, '63, &c.

B is from sums of the number of days with maximum temperature over 80° in the thirty years ending 1870, '71, '72, &c.

ALEX. B. MACDOWALL.

4 Bodfor Terrace, Aberdovey, Wales, January 5.

A Curious Projectile Force.

HAVE you or any of your readers had an experience similar to this? I placed a half bottle of champagne, *half full*, in a basin in a lavatory, with cold water tap dripping in same, corked. About twenty-four hours later we heard a crash, and found that the bottle had literally jumped out of the basin through the window and out into the garden, breaking itself on the stone work beneath window. Now I know there would be nothing remarkable in a bottle bursting, but in this case not a particle of glass was found in the room, and the hole in the window-pane being so clean cut shows enormous velocity. The wine was a good brand and of the year 1892. A scientific friend tells me the facts are so unaccountable that I thought I would venture to trespass on your space.

B.A. OXON.

¹ A short pathed meteor.