and neoergosterol are all capable of producing œstrus when injected in sufficient quantity³.

In the first place, these observations focused the attention of chemists and biochemists upon a group of compounds the activity of which from a pharmacological point of view was more or less completely unrecognised until the present time. Admittedly the phenanthrene nucleus was known to form an essential part of certain powerful alkaloids, but it was never suspected that a hormone would be found with a similar structure. It would appear almost justifiable to conclude from the observations quoted above that sterol metabolism has a very much wider and more important bearing than has hitherto been suspected, and that it may be possible to establish a connexion between carcinogenesis, certain phenomena of sex, and vitamin D activity. The dual activity of some of these condensed carbon ring molecules reported by Cook and Dodds⁴ may possibly

mean that this group of compounds forms the link between these three processes.

In any event, the observations undermine the whole conception of the specificity of the hormones, and one is tempted to speculate that, if so complicated a lock as that of œstrus can be picked by a number of skeleton keys which differ so much in appearance from the original key, then would it not be possible to find synthetic keys for other hormone processes? What is certainly very alarming is the thought that two pharmacological neighbours' doors may be opened with the same key, namely, the œstrus and the vitamin D doors, or, to take the case of a more unpleasant neighbour, the carcinogenic and the œstrus door.

¹ NATURE, 131, 56; 1933.

² NATURE, 131, 205; 1933.

³ J. Soc. Chem. Ind., 52, 268; 1933.

⁴ NATURE, 131, 205; 1933.

Meteor Shower of October 9

By A. KING

THE meteoric display of October 9 last completely surpassed expectations. In the south of England the sky was overcast, but the shower was seen in other parts of the British Isles. Mr. R. R. S. Cox, at Sheffield, observed "a considerable shower of meteors mostly in Draco and Cygnus". At Eskdalemuir Observatory, Dumfriesshire, Mr. L. Dods saw "literally thousands of meteors" between 19.45 and 20.30 G.M.T. They were most numerous in the first half of this period. Mr. W. B. Housman, at Seaton, Cumberland, watched the declining stages of the display, the sky being cloudy until 9.45 p.m. In Ireland, Mr. W. H. Milligan observed from 7.30 to 8.30 p.m. at a spot near Omagh: "I saw them literally in thousands. . . . At one time as many as 100 might have been seen in any 5 seconds of time." He placed the maximum between 7.45 and 8.00 p.m. At Armagh the Rev. W. F. A. Ellison considered that, near 8 o'clock, the meteors fell as thickly as the flakes of a snowstorm, and he timed the maximum as between 8 and 8.20 p.m.

On the Continent the shower was seen across the whole of Europe. In Portugal the peasants took refuge in churches, believing that the heavens were falling. At Birchircara, Malta, the display was carefully noted by Mr. R. Forbes-Bentley, who took counts over five-minute runs between 6.30 p.m. and midnight. He estimated that about 22,500 meteors were observed, only four of which did not belong to the great shower. There were no meteors in the last hour. He placed the maximum at about 8.15 p.m., when the rate was about 480 per minute. Miss N. Sytinskaja, Leningrad, states that at 18h. U.T., meteors were so frequent as to attract the attention of casual observers. The maximum was at about 20h.; the rate reached 100 a minute at Leningrad, 300 a minute at Pulkovo and 200 a minute at Odessa. The display then gradually weakened, and ceased at 22h. Meteors of mag. 2-3 prevailed; most of them left trains, colour yellowish.

The observations may be summarised as follows:—

1. The shower was probably richest in Ireland.
2. The meteors were generally faint. In Malta, for example, only about 5 per cent reached first magnitude; Mr. Milligan says they were mostly 4th mag. or less.

3. The maximum of the display took place at about 8 p.m., or shortly afterwards, varying slightly with different observers.

4. The effective duration of the 'storm' was 4 to 4½ hours, from which it appears that the thickness of the stream at the part traversed by the earth was roughly 300,000 miles.

5. Determinations of the Radiant-point:—

	α	δ
Eskdalemuir	$265\frac{1}{4}^{\circ}$	$+ 52\frac{1}{2}^{\circ}$
Armagh	266°	$+ 55^{\circ}$
Omagh	$264\frac{1}{2}^{\circ}$	$+ 54\frac{1}{2}^{\circ}$
Malta	$262\frac{1}{2}^{\circ}$	$+ 55^{\circ}$

Weighted mean $264.5^{\circ} + 54.5^{\circ}$

On October 9, 1926, a shower of Draconids from $263^{\circ} + 54^{\circ}$ was observed by Mr. J. P. M. Prentice at Stowmarket. A fine fireball (a member of the shower) which shot at 10h. 16m. p.m., was seen by some thirty other persons, and the radiant was found by Mr. W. F. Denning and the writer at $262^{\circ} + 55^{\circ}$, and the latter computed an elliptical orbit, first correcting the radiant for zenith-attraction. This orbit, compared with Mr. F. R. Cripps's elements of comet Giacobini-Zinner, is given below:—

	Comet G.-Z. (F.R.C.)	Fireball-radiant (A.K.)
ω	$171^{\circ} 44' 8''$	$171^{\circ} 22'$
Ω	$195^{\circ} 56' 35''$	$195^{\circ} 52'$
i	$30^{\circ} 43' 14''$	$30^{\circ} 49'$
$\log q$	9.99726	9.9960
φ	$45^{\circ} 47' 29''$	$45^{\circ} 51'$

Equinox 1926.0

There was thus no doubt of the identity of the two orbits and the consequent physical connexion of the meteor-stream with the comet. The period of the latter is 6.6 years, and the repetition of the shower from practically the same radiant-position after seven years shows that the recent 'storm' was a return of the Giacobinid display of 1926. It is evident that in the present year the earth passed through a much richer portion of the swarm. Absolute identity of position cannot be expected; the radiant is diffuse and its exact place difficult to define, while observational errors and possible perturbations of the stream must be taken into account.