wax were scratched with a needle, could be observed on the cuticle of the abdomen where the femora had rubbed it. If the legs were cut before dusting, no scratching could of course occur, and the nymph survived much longer.

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[1] Wigglesworth, V. B., NATURE, **153**, 493 (1944).

A System of Notation for Petroleum Hydrocarbons

I SHOULD like to invite attention to a system of notation I am using for petroleum hydrocarbons. In recent years the tendency to invent trade names (such as 'triptane' for 2,2,3-trimethyl butane) is understandable, but is to be deplored as a retrograde step away from unification and systematization. There is no need to depart from the international system of nomenclature if some simple system of notation is used for groups of atoms. The accompanying table contains a list which I have found suitable. It applies generally to hydrocarbons boiling in the gasoline range and a few simple substituted derivatives.

NOTATION FOR THE SYSTEMATIC NAMES OF HYDROCARBONS.

Abbreviation	Group or meaning	Abbreviation	Group or meaning
M	methyl	X	xylenes
E	ethyl	i	*iso*-
P	propyl	s	secondary
Ph	phenyl	t	tertiary
b	butyl	c	cyclo
a	amyl	Δ	double bonds
4	butane		(positions indicated by
5	pentane		following figures)
6	hexane		triple bonds
7	heptane		(positions indicated by
8	octane		following figures)
9	nonane		
10	decane	Substituents	
B	benzene	F	fluoro
T	toluene	C	chloro
oX	*o*-xylene	Br	bromo
mX	*m*-xylene	I	iodo
pX	*p*-xylene	N	nitro
		A	amino

Only the necessary minimum number of symbols is used, as there is no need to include the total number of alkyl groups in the name. For example, 2,2,3-trimethylpentane becomes 223M5; *iso*-octane is written i8, and 2,2,4-trimethylpentane becomes 224M5. *Iso*-pentane can be written i5, though the purist would prefer 22M3. In the naphthene series *cyclo*pentane becomes c5, and 1-methyl-3-*iso*propyl *cyclo*hexane becomes 1M3iPc6. Among the aromatic hydrocarbons we have EB for ethyl benzene and 135MB for mesitylene. The olefine butadiene becomes 4Δ13 and 2-methyl-3-ethyl pentadiene Δ2–4 becomes 2M3E5Δ24. Acetylene is 2δ. I have no experience of using this notation for the substituted hydrocarbons, and the extension to the list is offered without experience to stimulate criticism or extension of the notation.

Similar notations are probably in use in other laboratories, but in these days when the detailed analysis of fuels is occupying so many chemists on both sides of the Atlantic, a simple, uniform notation for the international nomenclature for labelling samples and for use on graph or in tables would be of considerable value, particularly as so much of this information has to be exchanged.

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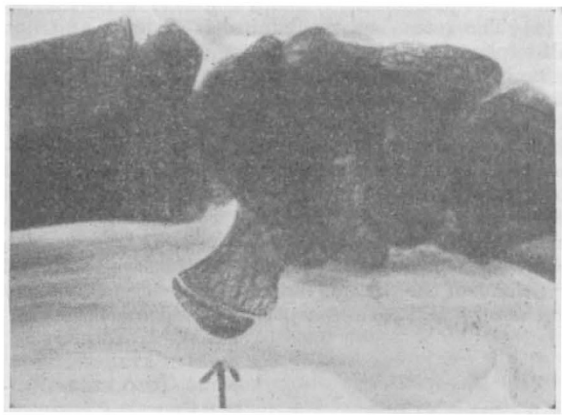
Feb. 12.

The Pisiform Bone

THE pisiform bone is often dismissed by the human anatomist as an insignificant sesamoid bone in the tendon of the flexor carpi ulnaris muscle, notwithstanding its articulation with the os triquetrum (os ulnare of comparative anatomy).

An extensive analysis of radiographs of the carpus in various mammals has shown that this minisculum is a canonical carpal bone, for in all young primates examined, with the exception of man, it presents a secondary bony centre with a well-marked epiphysial growth cartilage. The bony epiphysis is clearly shown in the accompanying lateral radiograph of the wrist of a young *Macacus rhesus*.



LATERAL RADIOGRAPH OF THE WRIST OF A YOUNG *Macacus rhesus*. (× 3.) THE ARROW POINTS TO THE BONY EPIPHYSIS OF THE PISIFORM BONE.

The pisiform is now, for the first time, shown to be analogous to the os calcis, which alone among the bones of the tarsus has a secondary centre of ossification in all primates, including man.

The hitherto unsuspected existence of this epiphysis in the pisiform bone makes it necessary to revise for all vertebrate forms the present views on the morphology of the carpus and tarsus. No mention of the epiphysis is found in the book on the hand by Wood Jones[1], in the anatomy of the rhesus monkey by Hartman and Straus[2], or in the extensive monographs by Schreiber[3] and Schwartz[4]. The same is true of the various papers by Broom and Watson on fossil forms.

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[1] Wood Jones, F., "The Principles of Anatomy, as seen in the Hand", 2nd Edit. (London, 1941).
[2] Hartman, C. G., and Straus, W. L., jun., "The Anatomy of the Rhesus Monkey" (London, 1933).
[3] Schreiber, H., *Anat. Anz.*, **78**, 369 (1934); *Gegen. Morph. Jahr.*, **77**, 22 (1936).
[4] Schwartz, W., *Gegen. Morph. Jahr.*, **81**, 187 (1938).