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EDITORIALS

*Editorials are written by members of the Editorial Board, and opinions expressed are those of the writers. Any statement that does not meet with agreement will be of service if it but stimulates discussion, to facilitate which the Correspondence section is maintained.*

“CHAULMOOGRA OIL”

Precisely what should—or perhaps better may—be designated by the term “chaulmoogra oil”? This is a matter concerning which there is at present some difference of opinion, or at least of practice. For many years the name chaulmoogra has been closely associated with the treatment of leprosy; all the world and his brother has heard of it, and physicians even of non-leprous countries, who know little else about the disease, usually know in a general way of chaulmoogra treatment. Nevertheless, for more than a decade there has been a tendency, at least in some quarters, to avoid the term in a general sense and to adopt “hydnocarpus oil” in its stead. It is as if, in the general adoption of oils of the *Hydnocarpus* species for use in treatment, there had been an essential, basic departure from the original material, which chemical, physical and therapeutic data show is not the case.

Adoption of this change by leprosy workers is doubtless induced largely because it has come to be generally understood that chaulmoogra is correctly applicable only to *Taraktogenos kurzii*

King and should not be used more generally. However, so far as we are aware there has been no serious consideration as to whether it is either necessary in the interest of scientific purism or desirable from the practical viewpoint to make the distinction implied by this practice. It is well to look into the basis of it and, without going into the old error that led to a 1912 definition of chaulmoogra as "a bixaceous tree of southern Asia, *Gynocardia odorata*,"<sup>1</sup> to note what recent writers have had to say about its significance and application.

Rock, who made actual explorations in search of chaulmoogra trees,<sup>2</sup> gives an especially interesting and illuminative account of the matter. As the true chaulmoogra tree he speaks specifically of *Taraktagenos kurzii*, saying that in Hindi and Bengali this is called *chaulmoogra* or *chaulmugra*, and by the Burmans *kalaw*. Seeds of that tree and of closely related ones, such as *Hydnocarpus castenea*—which is also called *kalaw* in Burma—are sold in the native bazars throughout that country. Rock states specifically that such other species probably share in providing the chaulmoogra oil of commerce, and points out that no absolute statement can be made as to the source of that oil so long as it is made from seeds of wild-growing trees rather than those of *Taraktagenos kurzii* grown as a plantation crop. From this it appears that native practice is not especially strict, at least in Burma, from where much of the "true" chaulmoogra oil comes.

Turning to those who use the materials in one way or another, clinicians as a whole seem less interested in precision of nomenclature than do the chemists. One of the latter, Perkins, writing in 1921<sup>3</sup> spoke of chaulmoogra and "similar oils, not correctly called chaulmoogra but perhaps quite as effective," and added:

The fact that some *Hydnocarpus* oils are very similar to *Taraktogenos* oil has led to the claim that these may be legitimately sold as chaulmoogra oil. If the word chaulmoogra is to be defined by its original native meaning, this claim can hardly be denied; but the modern practice of standardizing medical terms necessitates the restriction of the word to *Taraktogenos kurzii*.

<sup>1</sup>DORLAND, W. A. N. The American Illustrated Medical Dictionary, 6th Edition, Saunders, Phila., 1912. The name of the species used in this definition has been changed to *Taraktogenos kurzii* in later editions.

<sup>2</sup>ROCK, J. F. Bulletin No. 1057, United States Department of Agriculture, Washington, 1922.

<sup>3</sup>PERKINS, G. A. *Philippine Jour. Sci.* 21 (1922) 1.

On the other hand, Read and Feng<sup>4</sup> quote Perkins' acknowledgment of the admissibility of the broader use of the term, but not his further view, and add:

So in spite of its restricted use within the British Empire, in China for practical purposes, the word "chaulmoogra" may well be used for the Chinese seed *ta feng tzu*, the oil from which in some respects is preferable to that from the official British seed....

This oil, it appears, has been used in China for a very long time; Wong and Wu<sup>5</sup> say that the earliest mention of its use was by Chu Tan-chi of the 14th century.<sup>6</sup> Though Read and Feng do not say so, it is generally understood that the *ta feng tzu* of China is *Hydnocarpus anthelmintica* from Indo-China.

The other view is held by Muir<sup>7</sup> and Rogers and Muir<sup>8</sup> who with practically no discussion distinguish between chaulmoogra and hydnocarpus oils. This view has been accepted by many, probably in most cases more or less passively. This was the case with the Culion workers, and in consequence, to signify the general type they have for years used "chaulmoogra-group oils."<sup>9</sup> For the British, hydnocarpus has been made official and chaulmoogra has been discarded from the pharmacopoeia. Though the edition of 1914 (p. 262) defined chaulmoogra oil as "the fatty oil expressed from the seeds of *Taraktogenos kurzii* King," the present one (1932, p. 306) not only specifies *Hydnocarpus* oil, but limits this to the *wight-*

<sup>4</sup> READ, B. E. and FENG, C. T. *China Med. Jour.* 34 (1925) 612.

<sup>5</sup> WONG, K. C. and WU, LIEN-TEH. *History of Chinese Medicine.* Tientsin, (undated, but known to be 1932) p. 105.

<sup>6</sup> The description of its preparation quoted by Wong and Wu from the *Pen Ts'ao Kang Mu*, an ancient work on materia medica, is interesting enough to bear quotation:

"Take 3 catties of the seeds, remove the hulls and grind into a fine powder. Discard those that have turned yellow. Pack in an earthen jar and seal up tightly. Put the jar into a pot of boiling water and seal the pot so that no steam can escape. Boil until the oil assumes a black and tarry appearance."

For use one part of the oil was mixed with three parts of *Sophora flavescens*, made into a paste with wine and rolled into pills the size of the sterculia seed. Fifty of these pills were taken with hot wine before meals. Wong and Wu remark that Chu Tan-chi did not approve of this remedy on account of its ill after-effects. Nothing is said of any incidental effect of sealing the boiling pot.

<sup>7</sup> MUIR, E. *Handbook on Leprosy.* Cuttack, 1921, 39.

<sup>8</sup> ROGERS, L. and MUIR, E. *Leprosy.* London, 1925, pp. 254 and 257.

<sup>9</sup> For example, see COLE, H. I. *This JOURNAL* 1 (1933) 159.

*iana* species, *anthelmintica* receiving no recognition. In Japan *Hydnocarpus* is also official now, but no limitation is specified (Cole). On the other hand, the current (1926) edition of the United States pharmacopoeia still specifies *Taraktogenos kurzii* for chaulmoogra oil, but with a tolerance absent in the others quoted adds that oils from certain (unnamed) species of *Hydnocarpus* "when designated as such" and when meeting certain standards may be used in its place.

Recently, in connection with a proposed revision of these specifications in the United States pharmacopoeia, the Culion Medical Board has given serious consideration to the use of the word chaulmoogra. Points taken into account were: (1) that the term, being an old folk-name, is undoubtedly applied by the people of India not so much in strict designation of an oil obtained from a single botanical species as in a more general sense to signify a certain kind or type of oil regardless of its specific source; (2) that since "hydnocarpus oil" is based on a botanical generic name it cannot be used in a general sense, as a result of which the awkward term "chaulmoogra-group oils" has come into use; (3) that the use of the restricted "hydnocarpus oil" implies clinical abandonment of what, by analogy, would have had to be called "taraktogenos oil," whereas it is not at all certain that there is reason to abandon it if it should be made available in adequate quantity and quality; (4) that as a matter of fact the taraktogenos and hydnocarpus oils, not to speak for the moment of sapueinha oil (from *Carpotroche brasiliensis*) and perhaps others (as that from *Asteriostigma macrocarpa*), are sufficiently similar chemically, physically and in therapeutic effect to make a suitable common term desirable; and (5) finally, that the general medical profession and the public at large being familiar through long usage with the word chaulmoogra, to attempt to change this for hydnocarpus would be straining for a distinction which, in view of certain of the foregoing considerations, is clearly not important and is probably not entirely justified. In view of all this the Culion Medical Board decided to recommend the continuance of "chaulmoogra oil" as official in the U. S. pharmacopoeia, with the specification that it is gotten from both *Taraktogenos kurzii* and certain species of *Hydnocarpus*. The members of that body also agreed to use the term in that sense in their own writings, presumably with the expectation of designating the

varieties as hydnocarpus oil or taraktogenos oil as the case may be, as some do at present.<sup>19</sup>

An extension of the use of chaulmoogra in a purely general sense will be seen in an article entitled "Brazilian Chaulmoogra" by Dr. de Souza-Araujo, of Rio de Janeiro, soon to appear in the JOURNAL. Since the oil from this (sapucainha oil) is chemically so similar to hydnocarpus oil that Paget, Trevan and Attwood used it for a study which is reported elsewhere in this number of the JOURNAL, it seems entirely logical if it, too, should be included as one of the chaulmoogra oils. The use of the term in this general sense is recommended for the consideration of other leprologists.

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