be readily prepared in substantial quantity. Unlike fruits, the ascorbic acid of which increases as they ripen, the leaves of most plants contain the largest amount when young[1]; most of the vitamin rapidly disappears from leaves as the plants mature. With Iris, however, the ascorbic acid content of fresh undried leaves, which is 0·6 per cent in the spring, does not fall below 0·3 per cent as the season advances. Few plant materials contain as high a concentration as that found in Iris leaves even at the end of the season (at least in the vicinity of New York City). The leaves are heavy and can be cut with little injury to the root-stalks. The vitamin is separated from the gums and other substances present in press juice far more easily than from any other source we have used[2].

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[1] Marine, D., Baumann, E. J., and Webster, B., *J. Biol. Chem.*, **89**, 213 (1930).
[2] Baumann, E. J., and Metzger, N., *Proc. Soc. Exp. Biol. and Med.*, **30**, 1268 (1933).

Indian Gooseberry (*Phyllanthus emblica*)

THE need at the moment, especially of the Fighting Forces, for vitamin C has provided the urge for establishing more natural sources rich in this vitamin. Recent search has revealed that walnut[1], rose hips[2] and parsley[3] are among the most potent. The earlier, already familiar, sources are cited in Thorpe[4]. I wish to direct attention to the existence of another rich source, namely, the Indian gooseberry, discovered more than eight years ago, but missed by subsequent workers abroad and recently rediscovered by Chen *et al.*[5], from China.

In a general investigation on the vitamin C content of Indian plant materials, undertaken by me early in 1935 at the Biochemical Laboratory, University of Madras, in collaboration with Dr. M. Damodaran (senior author), it was observed and reported that the Indian gooseberry, *Phyllanthus emblica* L., contains as much as 290–468 mgm. per cent of the vitamin[6]. According to later workers in India and in the East Indies, the vitamin content of this fruit is even higher: 540 mgm. per cent[7], 720 mgm. per cent[8] of the fresh pulp and 921 mgm. per 100 ml. of the juice[5]. In the original publication[6] it was also reported that the gooseberry fruit, unlike most other plant sources, has the merit of possessing a mechanism capable of protecting ascorbic acid from oxidation, so that the vitamin remains largely intact, even in the desiccated fruit.

The fruit, it is understood[9], is now being utilized by the Food Department of the Government of India for making edible preparations intended to meet, in some measure, the vitamin C requirements of the Indian Fighting Forces. Khan[10] has reported that the gooseberry fruit has been found very useful in the treatment of cases of human scurvy in the Hissar famine of 1939–40. History has it that an attack of scurvy in the Indian army at Nassirbad in Rajputana in 1837 was treated successfully with an extract of the dried fruits[11]. The fruit is known in Hindi as *amla* and the tree is widely distributed in India and Burma.

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'Pradhan',
Poona, 4.

[1] NATURE, **150**, 267 (1942).
[2] *Biochem. J.*, **36**, 336 (1942).
[3] NATURE, **152**, 92 (1942).
[4] "Dictionary of Applied Chemistry", **1**, 503 (1941).
[5] NATURE, **152**, 596 (1943).
[6] *Curr. Sci.*, **3**, 553 (1935); *Proc. Indian Acad. Sci.*, 2B, 377 (1935).
[7] *Arch. Neerl. Physiol. de l'Homme et des Animaux*, **23**, 433 (1938).
[8] *Indian J. Med. Res.*, **26**, 165 (1938).
[9] Private communication from the Foodstuffs Directorate.
[10] *Indian Med. Gaz.*, **77**, 6 (1942).
[11] *Lancet*, **11**, 322 (1919).

Early Human Embryos

WE read with interest the short account of the nine–ten day human embryo described by Prof. Francis Davies in NATURE of April 15. This embryo is obviously of great importance and value to the study of early human development, in which such significant advances have been made in the past few years. Prof. Davies compares his specimen with the human ovum *Wi*-8004 described, in a preliminary communication, by Rock and Hertig[1], and he states that "these two ova represent the earliest specimens of fully implanted human ova yet discovered". In fairness to Drs. Hertig and Rock, who have made such valuable contributions to this field of embryology, we think it should be pointed out that one of the ova (*Mu*—8020) described by them is estimated to be 7·5 days old and is in the earliest stage of human intra-uterine development so far described. This ovum is, of course, at a very much earlier stage of development than that described by Prof. Davies. Even the next older specimen of Rock and Hertig (*Wi*—8004), the one to which Prof. Davies refers, is not, unlike Prof. Davies's specimen, completely implanted. To quote Rock and Hertig: "the defective endometrial epithelium has been partially repaired and is in the process of closing the defect created by the implanting ovum". A comparison of the photograph of Prof. Davies's specimen with the photograph of *Wi*—8004 in Rock and Hertig's communication leaves us in no doubt that the former is in a more advanced stage of development and of implantation.

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[1] Rock, J., and Hertig, A. T., *Amer. J. Obstet. Gynecol.*, **44**, 973 (1942).

Rock and Hertig[1] explicitly described their 7·5-day ovum (*Mu*—8020) as "implanted on" the endometrium; that is, this ovum has only just begun to embed itself and a large part of the ovum is still freely exposed in the uterine cavity. On the other hand, they referred to their older ova (including the 9·5-day ovum, *Wi*—8004) as "implanted within", "embedded in" the endometrium. In the limits of a short letter, I thus deliberately confined my comparison to "fully implanted" specimens, by which I mean specimens in which no part of the embryonic tissues is exposed freely to the uterine cavity. If completeness of endometrial epithelialization is to be the criterion determining whether an ovum is