the Welsh code. @@1 In the preface it is stated that Howel, “seeing the laws and customs of the country violated with impunity, sum­moned the archbishop Menevia, other bishops and the chief of the clergy, the nobles of Wales, and six persons (four laymen and two clerks) from each comot, to meet at a place called Y Ty Gwyn ar Dav, or the white house on the river Tav, repaired thither in person, selected from the whole assembly twelve of the most experienced persons, added to their number a clerk or doctor of laws, named Bllgywryd, and to these thirteen confided the task of examining, retaining, expounding, and abrogating. Their compilation was, when completed, read to the assembly, and, after having been confirmed, proclaimed. Howel caused three copies of them to be written, one of which was to accompany the court for daily use, another was deposited in the court at Aberfraw, and a third at Dinevwr. The bishops denounced sentence of excommunication against all transgressors, and soon after Howel himself went to Rome attended by the archbishop of St David’s, the bishops of Bangor and St Asaph, and thirteen other personages. The laws were recited before the pope and confirmed by his authority, upon which Howel and his companions returned home.” All this could not have been effected before Howel had subjected Wales to his own rule, therefore not before 943. We have three different recensions of the code, one for Venedotia or North Wales, another for Dimetia or South Wales, a third for Gwent or North-East Wales. We do not know how far these recensions were uniform in the beginning ; but a variance must have occurred shortly after, for the manuscripts in which the codes are preserved differ greatly from each other. The code was originally compiled in Welsh, but we have no older MSS. than the 12th century, and even the earliest ones (especially those of the Venedotia recension) contain many interpolations. The Latin translations of the code would seem to be very old, though even here we have no earlier MSS. (belonging to the Dimetia recension) than the 13th century. The Latin text is much shorter than the Welsh, but we do not know whether this abridgment was made on purpose, or whether the translation is an imitation of an earlier text. The texts present only a few traces of Roman law, which, however, are evidently additions of a later period. The whole body of Welsh laws was published in one volume by An. Owen under the direction of the commissioners on the public records (fol., London, 1841).

For further information on the barbarian codes, see Heinr. Zoepfl, *Deutsche Rechtsgeschichte,* 8vo, Brunswick, 1860, vol. i. p. 8 *sq.,* whose clear and able treatment of the subject has been taken as the basis of paragraphs 4-13 above ; comp. also Stobbe, *Geschichte der deutschen Rechtsquellen,* Svo, Brunswick, 1860. (J. H. H.)

SALICYLIC ACID, an organic acid found in nature, in the free state, in the flowers of the meadow-sweet *(Spiraea Ulmaria,* L.) and, combined with methylic ether, in the leaves of the wintergreen *(Gaultheria procumbens,* L.) and *Andromeda Leschenaultii,* in the bark of the sweet birch *(Betula lenta,* L.), and in several species of *Viola.* It was discovered in 1838 by Piria, who prepared it artificially by the decomposition of Salicin (*q.v*.). It is remarkable as being the first organic compound occurring in nature which has been prepared artificially on the large scale as a commercial article. During the last few years it has been extensively used in medicine as a remedy for acute rheumatism, either alone or in the form of its sodium salt. Possessing powerful antiseptic properties and being poisonous only in large doses (the medicinal dose being from 5 to 30 grains), it is capable of manifold uses in the arts and manufactures. In the proportion of from 1 to 10 per cent. it prevents the development of bacteria in fluids containing them, and if added to the extent of 1 part in 60 it will destroy their life. It also kills *Torula,* and prevents the souring of beer and milk. It hinders the chemical changes brought about by the action of vegetable ferments or enzymes such as amygdalin and sinnigrin, and consequently can prevent the formation of essential oil of almonds or of oil of mustard, &c. Plants watered with its solution speedily die. The addition of a little of the acid to glue renders it more tenacious; skins to be used for making leather do not undergo decomposition if steeped in a dilute

solution; butter containing a small quantity of it may be kept sweet for months even in the hottest weather. It also prevents the mouldiness of preserved fruits and has been found useful in the manufacture of vinegar. Unless the perfectly pure acid be employed the addition of salicylic acid to articles of food must be considered dangerous, some persons being peculiarly susceptible to its action.

Salicylic acid is met with in commerce in two forms, “natural” and “ artificial.” The former occurs as handsome prismatic crystals resembling those of strychnin, but considerably larger, usually about half an inch in length ; the latter is met with as light minute crystals bearing some resemblance to sulphate of quinine, but smaller. The natural acid is prepared by decomposing the volatile oil of wintergreen or of the sweet birch by a strong solution of potassium hydrate, and treating the resulting potassium salicylate with hydro­chloric acid, which liberates the salicylic acid. The artificial acid is prepared according to Robbe’s patent process by passing carbonic anhydride through sodium phenoxide (carbolate) heated in a retort, with certain precautions respecting temperature to prevent the for­mation of para-hydroxybenzoic acid. It is subsequently purified and recrystallized. An improvement has recently been made on this process by substituting sodium phenol for sodium phenoxide, the whole of the phenol being in this case converted into salicylic acid. Formerly this acid was met with in commerce contaminated with phenol, rosolic, and para-oxybenzoic acids, but is now prepared in a perfectly pure condition. The presence of the first-named impurity may be detected by its odour and by the melting-point being lower than when pure, the second by the pink tinge it communicates to the acid, and the third by its comparative insolubility in boiling chloroform, by the greater solubility of its calcium salt, and by its giving a yellow precipitate with ferric chloride. Sali­cylic acid when pure should be free from odour and should dissolve completely in alcohol, and its solution, when spontaneously evapo­rated without contact with air, should yield crystals having colour­less points. It has a specific gravity of 1·45 and fuses at 155° C. (311° Fahr.); above that temperature it is converted into phenol and carbonic anhydride. Its chemical formula is C6H4(OH)Co2H. It is soluble in 760 parts of cold water, in 4 of rectified spirits of wine, and in 200 of glycerin, also in olive and castor oils, in melted fats and vaseline. Alkaline salts of citric, acetic, and phosphoric acids render it more soluble in water, possibly from the base com­bining with it. An aqueous solution of salicylic acid gives a deep violet colour with ferric salts. The methyl, ethyl, and amyl ethers of the acid are used in perfumery, and the calcium salt if kept for some time and then distilled with water yields a liquid which has a strong odour of roses (Dingler, *Polytechn. Journ.,* ccxvii. p. 136).

When administered internally salicylic acid rapidly lowers the bodily temperature and reduces the pulse rate, blood pressure, and rapidity of respiration, causing death when given in excessive doses by paralysis of the respiratory organs. It is excreted in the urine partly as salicylic and partly as salicyluric acid, communicating to it a brown colour by reflected and a green one by transmitted light. When taken for some time it produces deafness, giddiness, headache, and noises in the ears, like quinine. Taken internally in medicinal doses it possesses the same properties as salicin and sodium salicylate (see below), but is much less used in medicine. Applied externally, it has a marked action on thickened epidermis, and is hence used for the cure of corns and warts, to relieve pain and destroy fetor in ulcerated cancer, and also in certain skin diseases in which an antiseptic is useful, as in psoriasis, eczema, intertrigo, lupus, and ringworm. Taken as snuff it relieves hay fever.

*Salicylate of sodium* (NaC7H5O3) is more frequently used in medi­cine than salicylic acid because less irritating to the mucous mem­branes. It is prepared by neutralizing a solution of sodium carbonate with salicylic acid. It occurs in commerce as small white crystalline plates with a slight pearly lustre, having a sweetish saline taste and mildly alkaline reaction. It is soluble in 1·5 parts of water and 6 of alcohol at 15° C. (59° Fahr.), but much more so in boiling water and alcohol. It is chiefly employed medicinally as a remedy for acute rheumatism, in which it lowers the temperature and allays pain. It is also useful in headache and in phlegmasia alba; its cholagogic action and its power of rendering the bile more fluid indicate its usefulness in the treatment of gall stones. It has been found of service in Meniere’s disease. Alcohol or other stimulants are often given with it to prevent the depressing influence on the heart’s action which is caused by large doses. Ammonia is, however, unfit for this purpose (Martindale, *Extra Pharmacopoeia,* 3d ed., p. 57). Like salicylic acid, it produces when given in full doses subjective auditory phenomena, but these symptoms are relieved by the use of ergot and hydrobromic acid. In a few persons it causes most disagreeable visions whenever the eyes are shut, and in others it has even produced delirium. In its action on bacteria it is about one-third less powerful than salicylic acid.

@@@1 There is no historical foundation for the legendary laws of a prince Dymal (or Dyvnwal) Moel Mud, nor for the Laws of Marsia, which are said to belong to a period before the Roman invasion, even so early as 400 years before Christ. Au English translation by the side of the Welsh text of the so-called triads of Dyvnwal Moel Mud is given by Owen, *The Ancient Laws of Wales,* London, 1841, p. 630.