LECTURE XX.

THE DEFINITION, REGULATION, AND BUYING OUT OF FOREST EASEMENTS.—(*Continued*)

Details of Definition (*see list, p.* 319).

(A) Of Wood-rights.—(1) *For Building.*

THE right to wood for building, which, especially in hill districts, may require timber of large size, and therefore of greater value, is a right which may be burdensome to the forest but is often indispensable to the right-holder. The "actual need" in this case, is with reference to the house or cottage, and the sheds, barns, and dependent buildings, which represent the equipment of the agricultural holding or other dominant estate, or the house and accessory buildings[1] proper to a person of the class to which the R. H. belongs.

The wood is wanted periodically for entirely rebuilding, and at other times for keeping in repair, the premises mentioned.

Reference has always to be made to the usual style of building in the locality. In the plains (*e.g.*) roof poles are mostly wanted: in some countries the house is raised some way above the ground, being supported on stout poles. In the hills, log-huts and timber houses, with slab or shingle roofs very similar to the Swiss "chalet," are found; and sometimes slates or slabs of fissile stone are in use instead of wooden slabs. Houses in the Basáhir Forest district (Sutlej Valley) are usually built with a framework of timber filled in with stones. According to the sort of building, the *kind* of wood can be prescribed; and there is never any need to allow the best or more costly woods for indoor or other work where an inferior timber will do as well.

The *quantity* cannot always be prescribed; but sometimes a periodical cutting of so many stems (of a certain size) can be defined More usually, the R. H. is required to make a special

[1] It is convenient to refer to the dwelling-house—or other chief premises—as the "principal building," and the sheds, outhouses, &c., as the "accessory" buildings.

application for what he wants, specifying what the work is, whether for general repairs, for re-roofing, for a door, &c.: this application should be checked by some local authority prescribed in the record. If the intervals at which wood can be demanded are to be fixed, it will be with reference to the number of years each kind of building will ordinarily last. The larger or better class of village house cannot need rebuilding frequently, but there may be repairs which need wood annually.

What has been said about the right being for the *existing* farm or estate to be provided for (p. 326) is here also applicable. The definition should, however, allow for such reasonable improvement of the holding and its buildings as does not amount to a formidable growth in the total demand, or a complete change of form. It could not be allowed (*e.g.*) that a right to wood originally required for a cottage and a barn or two, should in time grow into one for a large timber *chalet* or for a whole series of outhouses.[1]

(2) *For Industry and Agricultural Implements.*

In the case of wood required for industries or agricultural implements, the *purpose* can always be defined; and in all cases it will be found that there are customary kinds (and sizes) of wood used for the particular purpose; or such can easily be prescribed to the satisfaction of all parties. It rarely happens that the right to wood for plough pieces, harrows, &c., is burdensome, or any serious tax, on either the Forest growth or its money-revenue. But under this head will come local cases of demand for large and perhaps valuable trees—*e.g.*, *Hopea* and "Sál" (*Shorea robusta*), for hollowing out canoes or boats. In all such cases the exact kind and size of tree can be specified; and the taking out a special pass or permit for the cutting should be insisted on. And it can be conditioned to certain periods ascertainable by enquiry: canoes and boats of this kind must last for several years. A right to wood for large pestles and mortars used as oil mills, will be dealt with in the same way.[2]

[1] There are some good remarks on the subject in Danckelmann, Vol. II., p. 68.

[2] It would hardly be necessary to recognize at all, purely wasteful and un-

(3) *For Fuel.*

The demand for wood fuel may take various shapes, but in India these rights rarely reach the dimensions or the importance they do in Europe. In the hills, where there is a severe winter, solid billet wood may be (for some months in the year) a necessity; but in the large majority of cases, small wood, and even brushwood in bundles, is all that is even asked for, for domestic hearths and ovens.[1]

Wherever there is an ample supply of dead wood (not meaning dead timber-stems, unless they are old, long fallen, stems (*Urholz*) of no other value), it is always permissible to require its use before living wood is cut. And in forests which are being regularly worked, it is often possible to require branches and crown-wood (which in India is rarely utilizable), to be taken when available, in lieu of other kinds. In no case can mature *timber* of any "royal," "reserved," or other valuable tree, be claimable for fuel rights—*i.e.*, to cut up into billets. Thinnings (not otherwise utilized) and the wastage of fellings, &c., are of course available, however good the kind of tree.

The right to fuel is spoken of in the English law as "Firebote" or "Common of Estovers" (*Affouage* of French law). In Europe, where all material in a forest, as a rule, has value, a distinction is drawn between faggot-wood (of twigs and branches), firewood from stems of a size that only require to be once split, wood split into four;[2] and again the right to *dead* firewood is variously classified.[3]

reasonable claims. Twenty years ago I saw in Burma, fine large trees of "padouk" (*Pterocarpus dalbergioides*) cut, and just the largest circular cross-sections taken out for solid cart-wheels: the rest was thrown away.

[1] It will almost invariably be found in India, if the former and usual practice of a fuel-right be inquired into, that the R. H. has always gone to the nearest jungle, with or without some bullock, pony, or beast of burden, and cut and carried away whatever he could collect with the least trouble. Small trees of valuable kinds, are always, by custom, left untouched.

[2] Whence the familiar French terms, "*bois de corde*" (that tied together in faggots), *bois de rondin* (burnt in round billets), *bois de fente, bois de quartier* (that has to be split into two or four).

[3] In the German books, for instance, they distinguish *Lese-* or *Raff-holz*, which indicates broken branches, &c. (*a*) fallen by age or decay, (*b*) left behind in felling, thinning, &c., as of no value. *Lagerholz* refers to trees blown down by storm, fallen by snow-weight, or whole trees fallen by age (*Urholz*). *Lagerholz* ought not to exist in a well-managed forest except as the result of some calamity. *Bruchholz* is like "*Lesaholz*," only that the wood is not dead or rotten but broken by storm, &c. *Ast-holz* means boughs that are dead and can be snapped off with

Definition (beyond general instructions as to kind) is not easy; but it may be possible sometimes to specify a number of bundles, head-loads, bullock-loads, &c., to be taken *per mensem;* or to prescribe a certain area to be cleared of brushwood, leaving some village officer to divide the produce; if solid billet-wood has to be given, it ought to be possible to specify the size and the number of stacks of certain dimensions.[1]

In all cases, however, it would be possible to ascertain some limit, because the right is for the firing of a certain number of hearths, ovens, and cooking-places, belonging to the houses to be supplied. And a consideration of this would obviate an excessive allowance. As however the stuff cannot be sold, and the R. H. rarely cares to take more trouble than he need, he is not likely to cut and carry more than he really wants of the dead wood and small stuff which is his habitual consumption.

In the rare case (I do not know of an actual instance) of a right to cut firewood for sale, it would be necessary to fix a limit as to the number of bundles to be taken (of a certain dimension) and of the (general) kind or description of wood or brushwood.

As we have mentioned dead wood (bits and branches lying) or that can be broken (not cut) off by hand, or that comes from old fallen trees (long lying and decayed), it is well to speak at once of dead stems, *i.e.*, those *standing* dead (killed by fire, disease, insects, or by lightning), or *recently fallen* by effect of storm, avalanche, &c. No "dead wood" right extends to trees recently killed by some calamity on a large scale, and rarely to single trees standing dead or thrown down by storms.[2]

the hand without use of cutting tools, or branch wood left behind after a felling, &c. *Trockene Stämme* include all *standing* dead poles or trees. There may also be rights to stumps and rootstocks, *i.e.*, both above and below the surface.

[1] Charcoal, fuel-billets, &c. should *always* be dealt with by loads, or some measure of *bulk* or *dimension*—never by *weight*. The latter is still often spoken of, and *used* to be so always; the consequence being, endless disputes owing to the difference caused by drying or by insects (if the wood is long stacked), and sometimes fraud: *e.g.* charcoal dealers poured water on the mass to increase the weight. This, of course, becomes useless when the delivery is by so many sacks of a certain size, or baskets, or cubic feet, &c.

[2] I once met with a case in the Panjáb hills, where the manager of a temple—located, as is so often the case, in a *deodar* grove—had a right to trees blown down, &c. in the adjoining forest, for repairs. I believe the fall of the trees was occasionally aided if not artificially caused. In fact, in all cases of right to *dead standing* trees, if any such are obliged to be admitted, it is necessary to provide precautions against people *killing* trees on purpose to get them.

In hill forests, rights will sometimes be claimed to split resinous pieces off pine stumps or deformed trees, to be used as torches. In the old days, it was usual (to save trouble) to fell *deodar* trees seven or eight feet above the ground. The stumps were afterwards used by the villagers to cut torchwood from.[1] Such rights would always be defined to be for *deodar* or other resinous pines, and only from stumps, or from deformed and ill-grown trees.

(4) *For Conversion, or Production of some Substance.*

The practice of burning lime and making charcoal, commonly allowed in some classes of forest, is not often, as far as I am aware, claimed as a *right*. Such cases are rarely troublesome to deal with. In some forests, limestone pebbles are found in the torrent or stream beds that pass through them, and are dry for many months in the year; in others some form of lime-concrete is found in the soil (*kankar*, &c.); or some other material of the same class is calcined for use in mixing mortar. This material is collected, and then to calcine it, a further supply of light brushwood is required.

"Cutch-boiling" (extract of catechu from the wood of *Acacia catechu*) is almost confined to Burma. Here the trees (of a certain size) have to be cut, and the fuel for the boiling is obtained from the *débris* of felling, and from the dry chips that remain after the extraction of the catechu.

If in any case *rights* of this kind are found, it is more in the way of *regulation* that they require, to prevent risk of fire to the forest. They will be easily *defined*, as to general size of kilns or stacks, and the number of them that may be prepared in each season; the kind of material used is easy to ascertain and record.

In the case of rights to preparation (by distilling, &c.), wood-oil, tar, natural varnish, &c., the definition and regulation can hardly be separated; the kind of tree, and the *minimum* size for tapping, must be defined. In the case of distilling tar and pine-wood oil from *deodar* and pines, either the chips from fellings are thus utilized, or stumps or trees worthless for timber

[1] *Kien-holz* in German.

In no case can such rights extend to felling useful timber trees (see also under head "*Resin*"). Only refuse or worthless brushwood is required for heating purposes.

(B) Of Pasture Rights.

The general remarks made in Lecture XVIII. (p. 291) will already have suggested the rule for defining the *number* of cattle. It is to consider what number of each kind is proper for (or actually needed in) the ordinary, normal, and prosperous working of a farm or holding such as the R. H. has, or for his sustenance and for maintaining his livelihood (in the case of a purely personal right). This number is very much what the older writers called the number of cattle "levant and couchant" on the farm. The old standard, of the number which the farm (or person) could keep in stall during winter (or when there was no common of grazing in exercise[1]) is now everywhere disused. The actual number is judged of (*a*) by taking the average number kept during a convenient number of past years; (*b*) by comparison with the number, on similar farms or holdings in the neighbourhood, which is known to be reasonable and proper.

Allowance is made for a fair expansion (see p. 326), which does not amount to a wholesale creation of new rights. A man, for example, has a given number of acres and his family dwelling: he requires a certain number of plough cattle—oxen or buffaloes; he will also want cows for milk and perhaps a few goats. If he lives by selling milk, then cows only (or cows and goats) will probably be his stock. Allowance should be made for a full and prosperous condition of *such* a farm or business.

It is usual to allow sucking animals with their dams, as not in excess of the number reckoned: the privilege extends to the first year of age only.[2]

Observe that the number is always *for* the kind of farm (dominant estate), or for a person of the class and occupation to which the R. H. belongs: *e.g.*, suppose a prosperous farmer was to take advantage of a neighbouring "jungle" to maintain an extra herd of buffaloes, to make a profit (beyond his ordinary farm

[1] Known also in Germany by the term *Durchwinterung*.

[2] In France this is objected to, because it facilitates miscounting or fraud (see *Meaume*, Vol. I., p. 420, sec. 350).

work) from the "ghí" or clarified butter so largely used in India; this grazing would be no part of his *need as an agricultural holder*, in which character or capacity his right is admitted. In all these cases, if any extra number of cattle appears (and the same principle applies in all rights), the question of fact for equitable decision is, Does this form part of the necessary work of the farm, according to its normal, or usual, working?

The requirement of the Act, that the *number* should be fixed, is a very practical one; for suppose a small village should exist, the (liberally calculated) average total of its grazing requirements may be no serious or insuperable obstacle to proper Forest working; but if the number were not fixed, it might happen that, owing to the desirable situation of the village, or the abundance of culturable waste, the place might, in the course of years, grow to double or treble the present size (apart from those considerations of growth in prosperity of the *existing* population or the restoration from calamity spoken of) (p. 326). If all these new accessions of number could swell the grazing total, the burden might become serious: it is the express object of sec. 22 to prevent this. This is no kind of hardship; new settlers must take thought of the existing conditions: they cannot expect to be in a better position than they would be if there was no forest in the vicinity at all.[1]

In some parts of India we have to take account of (what I may call) a double claim to grazing: there may be local requirements of the adjoining villages or local right-holders, and also those of migratory herds. In the N.W. Himálaya, such herds and flocks graze at different altitudes during different seasons of the year. In full summer, they go to the "Alpine" pastures, beyond the forests; later, they pass through (and make a shorter or longer stay in) the forest region. During the winter, the herds live in the lower hills. In the Kangra district, for example, such herds have for generations past, regularly grazed over certain areas of forest known by custom; and it is held that these cattle-owners have now a prescriptive right to this annual grazing for the winter season. Here it would perhaps be difficult to introduce any

[1] Obviously, if the forest was so large that there was room for more grazing, additional cattle might be admitted without risk; but not as a right, but by a "concession" or on payment.

rule about *numbers*. The same herds, when moving up to the higher grazing grounds, sometimes stay for a time in the forests of middle elevation, where the *deodar* and mixed forests are, and often do great mischief. This, however, is not always the case; the herds often merely pass through the forest and do not remain and graze.

Whether any such herds have a *right* of grazing in any particular locality must depend on the facts; but the subject is one requiring clear settlement, because it presents an instance of a double claim on the forest. Not only have the rights of the villagers on the spot to be met, which is what we usually expect in Indian forests, but a separate and numerous body of claims is introduced, the admission of which would overtax the resources of the forest, and at the same time unduly restrict the local villagers in an enjoyment of the grazing, to which they would seem to have a much more proximate claim than the others.[1]

I do not think that it could be made out that many of these migratory herds have established even such an equitable claim as should be treated as a right; and it will be necessary in settling hill forests, to examine this matter thoroughly. I believe, as I said before, that the graziers in Kangra are held to have a right, but then it is their practice to stay for some months, and they have established a customary distribution of the Forest area among the different herd-owners, and they regularly return to the same beats year after year.[2] It is more than doubtful whether any right of this kind can be made out of the case of herds traversing the forests of middle elevation (where the grazing does most harm).

As to *kind*—In India we are chiefly concerned with grazing of bulls, oxen, and cows, buffaloes, goats and sheep. Grazing of mules, horses and donkeys is rare, and presents no difficulty. The kind must always be specified. There is no direct legal prohibition about goats; and what has to be said on the subject

[1] In the Chambú State this practice is very noticeable; but there the forest is leased to Government, and therefore the matter is settled by the rules annexed to the lease. The lease does not acknowledge any rights but such as belong to local villages and resident right-holders. In the Kulu Forest (Panjáb Himálaya) attempts have been made of late years to bring in herds of buffaloes to graze. This has been very properly resisted. The forests are, by effect of former settlement orders, burdened with many *local* rights, but are in no way bound to allow outsiders.

[2] In some cases the sheep are folded at night on particular lands which get the benefit of the manure dropped. In one case, I believe, a suit was brought to compel a shepherd to continue so to fold his sheep. Those curious on the subject will compare the old English custom of *frank-foldage* (Williams, p. 275).

will better come under the head of "Regulation." Every effort should, however, be made to reduce, or to get rid of, these animals; they are always destructive to forests, and are absolutely inadmissible in a forest under restoration, a plantation or a *reboisement* work. Swine feeding (as far as I am aware) in the forest is unknown.[1]

The specification of *season* of grazing will never give trouble: custom will have determined that it is during the rainy season only, or at other seasons for some local reason. Sometimes grazing is excluded, as a matter of local custom, from the forest, for the months during which bamboo shoots are growing up, or the like. If any question arises, it will easily be settled on the merits, with reference to what is really needed.

(C) Rights of Grass Cutting.

As an originally existing right, the practice of cutting grass is not common; but it is often recognised (as *e.g.* in Ajmer) as a kind of compromise or substitute for a right of pasture. It is possible to define it by fixing the number of bundles, or head (or other) loads of grass and similar herbaceous vegetation, growing on the surface, to be taken during a defined season (or daily, weekly or *per mensem*); some other matters coming under the head of "Regulation" may be recorded.[2]

In case this right is not for personal or for farm use but for sale, the number of bundles should be more carefully fixed. This right does not include cutting twigs or gathering leaves or boughs or brushwood.

(D) and (E) Rights of Litter and of Lopping.

It is well to treat these heads together.

The German books have a number of subdivisions of the head

[1] At any rate, anything like the "pannage" or *feeding* on acorns and beech-mast of Europe. In Europe, swine feeding is not regarded as generally injurious pigs are good forest-gardeners, and they eat worms, grubs and insects as well as acorns. Wild pigs in India do much damage in young plantations however.

[2] Dr. Danckelmann mentions, under this right, that we may take count of the number of head of cattle to be supplied with cut-grass, and check the number of loads, &c., by considering the probable requirements of the known number of cattle. A right of this kind is often valued by petty proprietors who have a pony or two to keep, or a single cow, &c.

"Streunutzung" (for which term I have adopted "litter rights" as a convenient general equivalent). It is "*Boden-streu*" if taken off the ground, and "*Reis-streu*" if consisting of twigs and small branches cut or lopped or gathered from trees and shrubs. *Boden-streu* is again (naturally) subdivided; there is *Rech-streu*, which consists of dead leaves, dry moss, and the surface humus, raked up; *Unkraut-streu*, which means cutting ferns, bracken, heather, and herbage generally, for litter; *Plaggen-streu* refers to vegetation forming a mat or mass, such as half-formed peat, matted roots and close-growing plants, not being regular grass-turf or pit-peat; this is necessarily taken up with a certain portion of soil adhering.

In France, it may strike us as curious that the law takes no specific notice of this dangerous right, nor has it a name.[1]

In the pine and deodar forests of Kulu (Panjáb), they claim rights of collecting humus and dead decaying leaves, which is used directly as manure: sometimes dry stuff is collected and first used as litter, being afterwards put on the fields when saturated with manure in the cattle stalls. In this way lopping rights are connected; for though loppings (from certain kinds of trees only, as *Grewia*, *Pistacia*, *Morus serrata* or Hill mulberry, *Ulmus sp.*) are used to supply fodder for winter use, boughs of pine and evergreen oak are used for cattle litter; the woody parts are ultimately burnt, but the leafy parts, saturated from the stalls, are put on the fields as manure.

In Bombay, the local term "ráb" indicates a plan of gathering (inferior) bamboos, branches, and vegetation of all kinds, and burning them in heaps on the rice-fields.[2]

These rights are of importance because (locally) no money compensation would procure a substitute. Whether "ráb" in Bombay is really indispensable, I am not in a position to say. There are various parts of India (West-Coast districts, also in

[1] In Gerschel's vocabulary of Forest terms in French and German (for use at Nancy) no equivalent is given: *droit de faîne* is perhaps something the same, but it is confined to scraping up dead pine-needles, &c. *Soutrage* is applied to cutting heather, broom (*Genista sp.*), furze, &c., to spread on the soil, or otherwise for litter.

[2] Either because the ashes fertilize the soil, or because the heat from the burning benefits the soil and facilitates germination of the seed. In some places it is held (as in the Bombay Presidency) that this ráb is not a right but only a "license." This does not, indeed, make any great difference as long as it is determined to allow the practice; but as it is no doubt one of the local obstacles to forest conveyance in this part of India, the recognition of the fact that there is no such *right* may be valuable in enabling the practice in time to be stopped, when a substitute can be found.

Chutiyá Nágpur, and doubtless other places) where each agricultural-holding has attached to it a plot of jungle land, with the express object of supplying materials for these (and other) purposes. Most of what has to be said on the subject comes under the head of "Regulation."

The *definition* will consist in describing the nature of the right. In the case of (the really dangerous) right of raking up humus for manure, it may be more difficult to define the extent as to quantity; but in a valuable deodar forest, it should certainly be worth while to ascertain the number of acres of land entitled to be so manured, and it would be possible to do something to ascertain the quantity fairly required per acre; *i.e.*, the number of basket or other loads: this would afford a basis of reasonable limitation and determining the "actual need."

As to lopping: if for fodder, the kind of tree and the places, can be defined. Quantity it is almost impossible to fix. Other matters that are of importance belong to "regulation," and will be noticed under that head.

(F) Rights to collect Minor Produce.

Rights to collect roots, dye-stuffs and other minor products are rarely injurious (with one exception). It is generally sufficient, after defining the persons, &c. entitled, to describe the material to be taken, the season of collecting, the mode and the locality. Quantity is usually here of less importance: it is always limited naturally. If any valuable drug or dye-stuff is collected, it may be a question whether some small toll or payment should not be required: indeed such is often customary. The object of this is not of course the trifling money-income, but that it affords a means of control, and makes the collectors more careful about grubbing up the soil and destroying forest seedlings.

Resin rights, if they exist, are really dangerous. Here it is possible (and necessary) to specify the kind of tree, and the number of trees to be tapped or notched in the year. But most other matters rather belong to the head of "regulation." In no case can wasteful methods of quickly killing large trees for the sake of resin, be recognised as rights.

(G) Hunting and Fishing.

I am not aware of any actual *rights* to hunt, shoot or fish in India, at any rate in State Forests of any kind.[1] If such rights are found to exist, their definition would include specifying the kind of game (general or special), the weapons or modes of capture to be used ; and the season. Regulation is here, however, the important thing—to prevent risk of fire and other damage to the forest.

(H) The Practice of Shifting Cultivation.

No *right* to practise any form of temporary cultivation by clearing the forest exists. But as, in certain remote hills (and other places, too, where the matter is more serious), the practice has been going on for many generations, and among tribes of a peculiar primitive character (*e.g.*, the Karens in Burma), it is not possible to stop it hastily. The Acts (as amended) themselves contain directions as to the requirements in the nature of definition, which consist in recording a statement of the claim (including the number of families or of persons to be allowed), any local rules in force, and "other particulars," and in proposing an area for the exercise. This record has specially to be referred for the orders of the local Government.

It may be desirable, however, to explain further why there is no *right* of this class allowed by law.

As regards *the soil*, the reason is that a temporary and shifting occupation could not give rise to any permanent title. The Land Act (II. of 1876) of Burma adopts this principle, as it allows no right in land in cases to which sec. 22 of the Act applies. The same principle has also been judicially affirmed in India. In the Kánara case, where the claim to a right in the soil was based (among other things) on the fact of "kumri" cultivation, and the

[1] The definition clause makes the term "forest-produce" to include tusks, horns, skins, &c. Some of these may be found lying in the forest and may not be the produce of the chase or shooting. I do not mean to deny the possibility of rights (though none could be claimed on the ground of necessity) but I have never met with any. It is always a matter of pass or licence.

payment of a Government assessment or tax thereon, it was held that this did not amount to any *permanent adverse occupation of a defined area*, which is necessary to establish a right, by prescription, in the soil; and that the Government assessment was only a payment in the nature of a toll or tax on forest usages, such as, under other laws, Government imposes, without in the least indicating that any right in the soil is recognised. It is quite unlike the case of regular land revenue, where Government recognises the person who is responsible for the payment of it, as the proprietor (or practically so) of the soil.[1] But further, no right is recognized *as an easement*, to practise such cultivation. No act of destruction or mischief can constitute an easement (p. 84). The Forest Acts specially decide this: *e.g.*, Burma, sec. 11, which expressly declares that no *right* (easement) is conveyed by an order for its practice. The India Act, Sec. 9A (4) is the same.

Let me now briefly describe the practice. The following passage extracted from a note by Sir D. Brandis (then Inspector General of Forests) well describes it. The note relates to Burma; but making allowance for local differences as regards the season of cutting and burning, the size of the clearing, and the length of the period which elapses before the same spot is resorted to and cleared a second time, the extract sufficiently describes the practice as it exists in different parts of India:—

"In January or February, each head of a household cuts down the forest over an area of from three to five acres, burns the timber, bamboos, and brushwood when dry [just before the rains set in], sows paddy [or some other crop] in the ashes, and reaps it in autumn. In the following year he cuts down another plot of forest and treats it in the same manner. Dense masses of grass, herbs, bamboos, and coppice-shoots grow up on the plots which he has abandoned; and after a period, which ordinarily varies from fifteen to thirty years, the forest has grown up sufficiently to be fit to be cut over a second time.

[1] In this case (pp. 512–13), Green, J. said: "The entry of *kumri* assessment . . . . . and its payment for a long series of years does not manifest any estate or permanent right in the forests." And again: "Even if it should be considered that the plaintiff had established a right to have *kumri* carried on" [this is the second question, which the Forest Acts answer in the negative] "such a right would not involve general ownership in the soil."

"This mode of cultivation is not peculiar to Burma: it is practised under the name of 'jûm' in Bengal and Assam, is known as 'khîl' and 'koráli' in the North-West Himalaya, as 'bewar'[1] in the Central Provinces, and as 'kumrí' [ponakad, takkal, &c.], in South India. It is, or was formerly, practised in several countries of Europe. As an instance, I may mention the hills of Styria, where it is known under the name of '*Brandwirthschaft.*' 'On these hills the forest is cut, the large timber is sold, and the tops, branches, and the small stuff are spread over the ground and burnt. The ground is hoed, and oats or rye are sown. Generally one crop only is taken; but sometimes rye is sown the first, and oats the second, year, after which the forest is permitted to grow up again. Under this system of cultivation, the fertilising effect of the ashes produces heavy crops; and as long as the wood was of little value on the hills of Styria, the system was very extensively practised. As, however, the price of wood increased, it was found more profitable to abandon this plan of cultivation, and to let high forest grow up on the ground.

"On the hills of the Pegu Yoma, where the most important teak forests are situated, the Karens, who are the chief *taungyá* cutters in that part of the country, do not in all cases return to their old grounds when the forest on them has grown up sufficiently, but they frequently move to an adjoining valley or to another part of the country; though, as a rule, each tribe cuts its *taungyás* within certain limits, which, however, are wide and undefined. Here the population is scanty, and they have extensive areas to roam over, from which they choose the best places for their *taungyá* clearings. Occasionally, they make plantations of the betel-vine, which climbs up the *Erythrina* tree, or they plant mango and jack trees, or they cultivate a few permanent paddy-fields in the forest; and in such gardens and fields they doubtless must be held to have acquired definite rights of occupancy. But the area of these gardens and fields is insignificant. On the vast forest area in which they cut their *taungyás*, they leave no mark whatever of permanent occupation. There are extensive areas covered with secondary growth of trees and bamboos, which has sprung up on deserted *taungyás*, and here and there the sites of their former villages can be recognised by the half-burnt house-posts in the midst of dense jungle. But these stretches of secondary forest which grows up on deserted *taungyás*,

[1] The term dâhyá is used in the *Central Provinces Gazetteer*, and the term "bewar" also; the latter indicating the strongly fenced plots or fields which result from the process. I have heard, however, that "dâhyá" properly refers only to one kind of this cultivation in which the plough is used. In Bengal "jûm" is said to be rather an official than a vernacular term; each locality has its own name.

are separated by large areas of forest which has either never been touched, or which has had time to grow up again into high forest.

"In many cases the Karens return to their old grounds, and in such cases their hamlets ('tay'), though they are shifted from place to place, according to the position of their *taungyá* grounds, remain in one valley, or at least in one district. In other cases they move to greater distances and cut their *taungyás* in old forests. Sickness, quarrels, a visitation of rats, or an unfavourable omen, are generally the causes for a move to more distant regions; but frequently they move without a definite cause, except perhaps a sudden fancy of their 'tsôkay' or headman. It will be understood that, under these circumstances, there is no trace of village areas; there is no attempt at protecting their *taungyá* ground against fire, and no occupancy rights over definite plots of land, except in those rare cases in which they have permanent gardens or paddy-fields. In many other hill tracts of British Burma, the system of *taungyá* cultivation is similar to that which is practised by the Karens on the hills of the Pegu Yoma."

One of the great troubles consequent on this practice is, that the fire from the clearings is allowed to spread in all directions, and mile after mile of forest is annually burnt. Teak and other valuable trees disappear under the process; and the hills subjected to such a treatment, when it is repeated at short intervals, become either wholly barren, or clothed only with the poorest stunted vegetation. It is well known in Burma, that teak has been virtually exterminated over large areas of country by this practice.[1]

There are, however, cases where such cultivation is not only harmless, where it is natural and suitable to the locality, but where its hasty suppression would result in great suffering, and possibly in depriving the Forest Officer of the services of the only tribes who will undertake forest work and furnish guides and helpers. The material destroyed may be in such abundance, that it has far less value than the crops raised; and even if it has value, its utilization and export may be impossible, while the necessity of food production demands its removal. On the other hand, there are cases where the waste of timber is intolerable,[2] where the slopes on which this practice is carried

[1] See Kurz's Preliminary Report on the Burma Forest Flora, p. 72.

[2] A forest officer informs me that he has been able to estimate the value of timber on a jûm clearing in the Gâro hills, cut and destroyed, at Rs. 2,000 to

on, are at the head-waters of streams, and in other localities where the forester knows it is of the highest importance to maintain forest. Here, for the benefit of a few villages or a limited tribal population, the hills are to be denuded, the soil washed off, streams below to be dried up, and creeks once navigable to be choked with silt.[1]

The practical solution of the question is, I venture to think, that adopted in the India and Burma Acts. It is to refuse to create a legal right, which cannot, strictly speaking, exist; and at the same time to make practical provision for settling claims on equitable grounds, and for allowing such cultivation on defined areas and under certain conditions inside the forest or outside, as circumstances require.

Whenever the practice is really dangerous, Government must exercise its right to stop it. Gentle and persevering efforts of sensible officers, will rarely fail to succeed in gradually getting rid of the practice without causing any suffering whatever. It was so extinguished by Sir Mark Cubbon in Mysore; a great measure of success has been attained in the Central Provinces and in Bombay. And always the first step is to make liberal contributions to aid the people in getting seed, ploughs, and cattle, or whatever else is needed to get them to settle down and terrace the hill-sides into permanent fields, or emigrate into the plains where level cultivation is possible. Where the interest of the whole country and its water-supply is bound up in the preservation of forest, as on the Western Ghâts, resolute and persevering efforts directed to this end will generally be successful.

4,000. In this case the land does not belong to Government; but this is only an instance of what well may be the case elsewhere, as regards this one question of the value of timber destroyed.

[1] As in parts of the Konkan. And then it is very easy for writers to draw harrowing pictures of the poor hill people prevented from pursuing the "simple practices of their forefathers" and driven from their sylvan haunts by an army of "ignorant and unsympathetic Forest Officers." The tendency of such pictures, possessing as they do, a degree of truth on one side only, is to inflame the official mind with departmental and personal feeling, instead of directing it to a serious and dispassionate study of the question; it is far wiser to give due weight to the facts (where they are locally important) which necessitate forest preservation, and thereby afford a strong incitement to resolute effort in the direction which is so necessary in such cases, namely, to the best means of establishing permanent cultivation and founding villages in lieu of shifting hamlets and temporary clearing. So long as the Forest Settlement Officer, or other official, is in an uninformed and biassed state of mind on the question, so long he is sure to overlook both the importance and the feasibility, of this remedy.

Where it is not possible or necessary to shut out such cultivation altogether, it is essential that defined blocks should be assigned in the forest area; these must be of sufficient extent to admit of the necessary rotation. It is also essential that attention should be directed to fire-tracing these blocks, so as to prevent the fire on the clearings from spreading to the adjacent forest. That this is possible is amply proved by the practice of the people in the hills between the Sittang and Salween rivers in Burma, to which I have already alluded.

In this connection I must, however, mention a special case originally brought to light by Sir D. BRANDIS. In parts of Burma (the hills between the Salween and Sittang Rivers), there is a curious instance of the complete occupation of land by Karen tribes, who, though they only practise "taungyá," still do so in a manner which leaves a fair presumption of real permanent occupation. The equities of such a case will of course be provided for in due time by the specific grant, or recognition of right, pursuant to rules made. In these cases in fact, we observe a kind of[1] transition stage between shifting cultivation and regular proprietary occupation.

The Madras Act makes no allusion directly to *Kumri* cutting, but it is clear from the wording of Chap. II. throughout, that no right to it would be allowed in a Reserved Forest; nor could such be even claimed. As to Government lands not being constituted forests, the rules (under Chap. IV.) would regulate the matter if necessary.

[1] Sir D. Brandis's own description of these curious villages, and some further remarks, may be found in my "Land Systems of B. India," Vol. III. p. 507.