## Some Monterey trees in Ireland

By A. Mitchell, Agr.(Forest)B.

At first sight it seems strange that trees found in nature only on the Monterey peninsula in California, a place of hot, dry summers, should grow with singular speed and luxuriance in cool, damp Ireland. In fact, they do not really like Monterey at all. They only grow there, which is not the same thing. During the onset of the Ice Ages, the trees of the Rocky Mountain complex could move south ahead of the cold, following their preferred climate towards, and into, Mexico, since the ranges run north and south. When this was (as we hope) all over, the trees migrated north again. Some, however, took a wrong turning. Erosion by the sea had cut the minor range and left the stub as a peninsula. The trees could go no further, and as the hills and valleys behind became drier and hotter. they could not retreat. So there they stuck, with the climate warming up and the beach huts and golf courses arriving. They would be far happier on the Olympic Peninsula with the Sitka spruce and Thuja.

In the autumns of 1966 and 1968, with the very kind cooperation of the Irish Forestry Division, Mr. A. M. S. Hanan and I were enabled to visit a large proportion of the biggest and finest trees in Ireland. We measured over 2,400 specimens in the 22 days, and the best that we saw of three species from Monterey are remarkable trees and will be detailed here.

The Monterey Cypress, Cupressus macrocarpa

This species was introduced in 1838, and was commonly planted from about 1850. The first feature to note is that the habit of growth in Ireland is different from that in England. In Ireland even young plants have very vigorous branches thrusting out at a low angle, about 30 degrees above horizontal. These shoots are dense, but slender cones in outline, and project well beyond the general crown. The trees set out with the utmost vigour to become the biggest aces-of-spades there ever were; huge rounded, squat, but shortly pointed bun-shapes. This is emphasised where they are multiple stemmed from the base, but occurs almost as strongly where they have a single bole for some considerable height. Even in Cornwall this is less marked than in eastern Ireland, and there is nothing comparable with those in the west. In most of England, and certainly in the east, this tree is either a columnar or conic tree on a single stem, or where it is a multiple, it is a broad cone until old enough to flatten out like a Cedar of Lebanon, a form which seems not to occur often in Ireland. The faster growth is obviously one reason for the Irish trees being a different shape from those of, say, Suffolk, but growth in Cornwall and Devon is about the same as in Kerry or Mayo. No tree in Britain can, I am sure, match the golden "lutea" trees at Ashford Castle, Co. Mayo, which are broader than they are high.

Beginning with the hardly measureable trees which bush from ground level, none can equal that at Powerscourt. Planted as recently as 1898, it was in 1966, 90 ft. x 37 ft. 5 in. at ground level. The forty or more trunks contain a prodigious quantity of timber for 68 years growth. The next biggest of this sort are at Emo Park, 95 ft. x about 30 ft., and at Kilmacurragh, 90 ft. x 24 ft. 10 in. both at ground level. Of those on a leg of one foot, or of minimum girth at that height, the biggest is at Fenagh House, Co. Carlow, and 86 ft. x 22 ft. 7 in. At Hamwood, Co. Meath, is a fine tree now 85 ft. x 21 ft. 7 in. at two feet, a vast, globular bush on a two-foot leg. This is surely the one recorded as dating from 1844, but in 1903 one there was noted as x 10 ft. 6 in. but with a clean stem to five feet, so, unless there was then a second tree, the lowest branches have grown

since then.

The largest tree properly measurable at five feet, is one on the lawn at Adare Manor, Co. Limerick. The top is dving back a little, but the bole is 22 feet round and clear of branches for 15 feet. On the same estate, but by a gate in the Deer Park is one of 85 ft. x 21 ft. 9 in. with a five-foot bole, and beside this are two more, 100 ft. tall; one with a girth of 13 ft. 11 ins. and a clear bole of 15 feet. Also in the Deer Park, by a road, is the finest bole of this species we have seen. This tree is 108 ft. x 16 ft. 11 in. and has been pruned clear to 42 feet, long enough ago to be smooth now. The tallest Monterey cypress we found is by the river at Powerscourt, and 118 ft. x 15 ft. 5 in. At Derreen, Co. Kerry, a magnificent tree was 110 years old and 21 ft. 10 in. in girth, with a five-foot clear bole in 1966, so this is the equal of the biggest at Adare, by now. Other big trees are: Clonmannon, Co. Wicklow, 75 ft. x 17 ft. 10 in. (15 feet clear); Birr Castle, 90 ft. x 17 ft. 3 in.; Rossdohan, Co. Kerry, 78 ft. x 17 ft. 6 in.

One more specimen must be mentioned, for it may be unique. At Glencormac, Co. Wicklow, we found near the burnt house, a large, spreading and decisively pendulous tree of 50 ft. x 11 ft. 4 in., with just five feet of bole. It could only be var. "pendula", and is, in fact, given as such by Mr. Fitzpatrick in his records of 1931, when it was 20 ft. x 5 ft. 6 in. This variety is not even mentioned in any authority so far consulted, but it certainly exists at Glencormac as a most splendid tree. It is to be hoped that it will be spared during any re-building there.

## The Monterey Pine, Pinus radiata

This was introduced by Douglas in 1833, but no original tree is now known, and few from before 1850. Growth in Ireland is of the same habit as that in England, with open-grown trees heavily branched and wide of crown, and rarely exceeding 100 feet in height, despite growing the first 80 feet in as little as

30 years.

Only one of this species had to be measured as low as one foot up the bole. This is a huge tree at Hamwood which at that height has a girth of 29 feet. In 1905, it was 17 feet, and in 1931, it was 22 feet 6 in. It is now 85 feet tall and was probably planted in 1844. At Adare Manor one was planted in 1841, and was 72 ft. x 7 ft. 6 in. by 1891. This is probably the tree which is now 100 ft. x 16 ft. 3 in. Measurements given in 1905 and 1931 refer to a smaller tree, and fit one nearby which is now 100 ft. x 14 feet. The next oldest is a huge tree at Fota, Co. Cork, planted in 1847. It is 85 feet tall, and measured above an enormous branch which rests on the ground, was 19 ft. 11 in. round in 1966. One planted at Blandsfort, Co. Leix in 1851 has grown rather slowly. In 1931 it was 73 ft. x 11 ft. 8 in., and is now 73 ft. x 14 ft. 3 ins. Another dating from 1851 is at Coollattin, Co. Wicklow. It was 56 ft. x 9 ft. in 1891 and has now grown to 90 ft. x 16 ft. 9in., with a clear bole of 15 feet. Perhaps the finest specimen is a huge, mushroom-crowned tree at Derreen, which was 85 ft. x 20 ft. 7 in., even measured above a vast branch in 1966. The tallest is, however, easily one of three trees near the top of the grounds at Inistioge, Co.

Kilkenny. This was 125 ft. x 18 ft. 1 in. in 1966, and the others were 110 ft. x 15 ft. 4 in. and 100 ft. x 17 ft. 2 in. One planted at Powerscourt in 1859 was 103 ft. x 15 ft. 9 in., and a splendid tree near the house at Headfort, Co. Meath, was 65 ft. x 20 ft 6 in., both in 1966. At Ashford Castle, two near the castle are 96 ft. x 15 ft. 6 in. (20 feet clear bole), and 105 ft. x 15 ft. 7 in., while a third, down by a group of Araucarias is 118 ft. x 15 ft. 6 in. An old tree beside Muckross House is 90 ft. x 17 ft. 10 in., and in the garden, down in the woods, a younger tree has the finest bole of any of this species we have seen. It measures 95 ft. x 14 ft. 11 in., and is almost cylindrical and quite clean for exactly 50 feet. A smaller, similar tree beside a gate to a private road out of Killarney House is 90 ft. x 11 ft. 5 in. and clean for 38 feet.

## The Bishop Pine, Pinus muricata

This is also found a little beyond the Monterey area, but is a typical Monterey tree. It was introduced by Hartweg in 1846 and grows very fast, but has never been planted on the scale of the two species preceding, and remains a rare tree found in a few gardens and collections.

The planting which is outstanding above all in these islands is a line beside the drive into Muckross House. There are some 50 trees in about 100 yards, largely along the top of a wall. They are probably about 50 years old at the most, possibly barely forty and are of the tall, narrow type with dark bluish green needles, which is the form from the two most northerly areas of the range. They have straight boles and conic tops and are still growing fast. There is little variation in size among the best thirty or so which range from 90 to 95 feet in height, and from 6 feet to 7 ft. 6 in. in girth, except for an end tree of 8 ft. 3 in. A plot at Bedgebury Pinetum, in Kent, was planted with trees raised from seed from this line, and despite the very poor soil there, they are growing at 6 and 7 feet a year, and now it can be seen why. In the gardens below the house are two trees, perhaps a little older. One is a fine tree of 95 ft. x 8 ft. 6 in. At Ashford Castle, many Bishop pines were planted with Monterey pines, probably in the 1850s, in an avenue. The hurricane "Debbie" has destroyed nearly all these, but one remaining, although its top was badly damaged, is still a fine old veteran, and, measuring 80 ft. x 12 ft. 6 in. it has the distinction of being the largest known in these islands. At Dunloe Castle, Co. Kerry, there is a small group of young trees, about 35 years old, and the larger of two of almost the same size is 64 ft. x 5 ft. 5 in. At Birr Castle, there is one of 59 ft. x 6 ft. 3 in.

All the larger trees mentioned are substantially bigger than any known in Monterey. The cypress there requires 85 years to reach a girth of 6 feet.