

Finger Lakes, New York

FOR MOST NEW YORKERS, the Finger Lakes is a picturesque resort area in upstate New York where holiday houses tightly pack the hundreds of kilometres of lake shores. If they do recognise it as a wine-producing region, they are most likely to associate it with the production of relatively cheap wines of the Concord type, those distinctively flavoured wines that are so alien to the consumers of *vinifera* wines.

The Finger Lakes region is the second most important grapegrowing region of New York State with one-third of the state's total area. The most important region, Chautauqua/Erie, almost exclusively grows native American varieties based on *Vitis labrusca*, e.g. Concord, whereas the Finger Lakes has at least 35 per cent devoted to non-American varieties. New York is the third most important state viticulturally in the USA. Two-thirds of its 12,700 ha are American varieties and one-third of its production is used for wine, with the remainder for jam and juice.

The Finger Lakes are long, narrow, deep lakes carved by Ice Age glaciers. There are 11 lakes in total of which the three largest, Keuka, Seneca and Cayuga, have most of the vineyards in close proximity. Without the presence of these lakes, viticulture would not be possible. Away from the lakes, the winters are too severe and the risk of vine death is high. The large bodies of water moderate the climate and the steep slopes of the lake shores permit good cold air drainage and reduced frost risk—even so, there are fewer than 200 frost-free days per year and the risk of both early and late season frost is high.

The region has a very continental climate with warm to



A *vinifera* vineyard on lake Keuka



Peter Dry

Vineyards of the World

hot summers and very cold winters (mean minimum temperature of the coldest month is -8.3°C). The growing season is short: accumulation of day degrees¹ at Geneva (latitude $43^{\circ} 0' \text{N}$) is 2,519, similar to Bordeaux ($44^{\circ} 50' \text{N}$). However, the Finger Lakes climate is much more continental: CTL² = 25.5°C compared to 14.1°C for Bordeaux. Also, mid-summer mean temperature (MJT³) = 22.2°C for the Finger Lakes is more comparable to the Barossa Valley than Bordeaux (MJT = 19.5°C). Growing season rainfall is high at 515 mm. In the southern part of the region, soils are mainly derived from acidic, shale rock—American varieties are well-adapted to these soils. In the north there are areas of soils based on limestone, much more suitable for *vinifera*.

The Finger Lakes region is approximately 80 km in both north-south and east-west directions. Watkins Glen lies at the southern boundary and the northern boundary is just 17 km south of Lake Ontario. It has been the centre of the New York wine industry since the 1820s. Until the 1970s, wine production was based entirely on American varieties.

¹ Base 10°C , April to October.

² CTL = continentality or mean annual range.

³ MJT = mean July temperature (northern hemisphere) or mean January temperature (southern hemisphere).



South east shore of Lake Seneca

However, since that decade, non-American varieties have become more important for wine production.

There are currently around 4,000 ha of vineyards planted in the Finger Lakes, of which 65 per cent are American varieties, 25 per cent hybrids and 10 per cent *vinifera*. Of the American varieties, Concord is by far the most important. Other major red varieties are Catawba and Delaware, with Niagara, Dutchess and Elvira the major white varieties. It is likely that Niagara alone will remain important for wine production in the future: it is very winter-hardy with good yield. The hybrids (crosses of American species with *vinifera*) currently have the largest area for wine production. White varieties include Aurore, Seyval Blanc, Vidal Blanc, Vignoles and Traminette. The major red varieties are Baco Noir, Chambourcin, Foch, De Chaunac and Chancellor. Although the wine quality of the hybrids is inferior to that of *vinifera*, they are more winter-hardy and higher yielding.

For many years, it was thought that *vinifera* could not be grown commercially in this region. However, once it was demonstrated that *vinifera* could survive the harsh winters if grown on the best sites with the right rootstocks and with appropriate management practices (e.g. soil mounding and multiple trunks), there was no looking back. The major white *vinifera* varieties are Chardonnay, Riesling, Traminer and Pinot Blanc with Cabernet Franc, Merlot and Pinot Noir for the reds. The climate in general is marginal for Cabernet Sauvignon, however it can be ripened on the warmest sites, particularly on the eastern side of Lake Seneca. The popular-



Concord vines near lake Cayuga

ity of Cabernet Franc is, in part, a consequence of its cold-hardiness and the planted area continues to increase.

Traditional row \times vine spacing for American varieties is 3m \times 2m whereas new *vinifera* plantings are likely to have 2.7 m rows. Because they have sprawling growth habit and inherently low bud fruitfulness, American varieties are usually grown on high training systems such as 6-arm kniffin, Umbrella kniffin and Hudson River Umbrella. By comparison, approximately 75 per cent of *vinifera* is on VSP and 15 per cent on Scott Henry. The Wagner vineyard on the east side of Lake Seneca prefers Scott Henry for *vinifera* because yield is higher and ripening is earlier than VSP. The Finger Lakes is the home of the Geneva Double Curtain but it is rarely used for either *vinifera* or American varieties here, in part because the vigour is not sufficiently high.

For *vinifera*, cane pruning is mainly used because cordons do not survive the cold winters very well. Most vines have three trunks. It is a standard practice to bring up one new shoot each season to create a new trunk—a sucker is retained at the base of the old trunks. However, this does create some difficulties with undervine weed control and effectively precludes the use of systemic herbicides during the growing season. Both shoot and bunch thinning are regularly practised on *vinifera*, in addition to leaf removal in the bunch zone in early August. Some vineyards are irrigated during the growing season. Mechanical harvesting is used extensively (75 per cent for *vinifera*, close to 100 per cent for non-*vinifera*). The main rootstocks are 3309, 5BB and SO4. At the Glenora vineyard on the west side of Lake Seneca, Cabernet Franc on 3309 rootstock typically bursts in early May with harvest in late October to early November. For *vinifera* varieties, yields of 8 to 10 t/ha are the aim whereas hybrids and American varieties will produce two to three times more. The low-priced Concord needs to produce at least 15 t/ha just to break even.

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