

# CULTIVAR & GERMPLASM RELEASES

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## ‘Nakada’ Holly<sup>1</sup>

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*Ilex crenata* Thunb. is one of nearly 200 species of holly indigenous to eastern and southeastern Asia. The species was introduced into cultivation in Europe about 1864, and into the U.S. shortly afterwards. *Ilex crenata* is probably the most successful small-leaved evergreen, dioecious shrub in the eastern U.S. for use in foundation plantings, as accent plants and in hedges. At the present time more than 125 named cultivars of *I. crenata* have been introduced into cultivation. These clonal sections are distinguished by different habits and rates of growth, varying leaf shapes and sizes, contrasts in adaptability to variable landscape purposes, and versatility in hardiness, as well as heat tolerance.

Among the numerous selections for leaf shape and size, and habit the most distinctive and unusual cultivars of *I. crenata* are ‘Mariesii’ and the new selection ‘Nakada’, the description of which follows.

### Origin

*Ilex crenata* ‘Nakada’ was introduced into cultivation, in the U.S. from Japan in 1957 by Dr. John L. Creech as *I. crenata* var. *nummularia* (1,7). Following introduction, this clone was recognized as the first staminate selection of the “Nummularia Group” of *I. crenata* (3,4).

‘Nakada’ is of ornamental value, and is extremely important as a source of new germplasm. It may be used as a pollinator for *I. crenata* ‘Mariesii’, a pistillate cultivar originally described by Dallimore (2) as a variety of *I. crenata*, that also belongs to the “Nummularia Group.” ‘Nakada’ will also pollinate any of the numerous pistillate sections of *I. crenata*. A limited distribution of ‘Nakada’ as *I. crenata* var. *nummularia*,

was made from the U.S. Dept. Agr. Plant Introduction Station, Glenn Dale, Maryland, to nursery and institutional cooperators in 1964 and again in 1971. It is a horticulturally significant plant and has demonstrated potential value for future hybridization programs.

### Description

The original plant of *I. crenata* ‘Nakada’, PI 236233, N.A. 25701, is an erect, stiff, upright, single to few-stemmed, densely branched staminate shrub. Since its introduction into the U.S. in 1957 it has attained 3 m in height and 1 m in width. The branching habit is partially brachytic, i.e. shortened internodes, and the plant demonstrates dwarfing with conferted foliage. Color of the branches and branchlets is of the Green Group, 143 A (8). These are ascending to spreading, often thickened when growth is reduced, and become more or less horizontal with maturity. Annual growth of the terminal leaders may be up to 15 cm with internode length ranging from 2 to 30 mm. The coriaceous, evergreen leaves are predominately ovate-elliptic to obovate, and only occasionally orbicular to

suborbicular. Leaf blades are 5–15 mm long and wide, rarely to 25 mm long. Upper surfaces of the leaves are glossy and dark green, Green Group, 141B; lower surfaces are distinctly punctate and dull yellowish-green, Yellow-Green group, 146 A. Leaf bases are truncate to obtuse; margins are prominently thickened with, one to four minute, acute, mucronate teeth present on each side. Leaf apices are tridentate with 2 conspicuous notches. Teeth and crenations on the leaf blades are provided with fragile, amber-colored mucronations. The 2–5 mm. long petioles are thickened, dilated and grooved towards the bases. Subtending stipules are early caducous and appear on immature shoots only as blackish triangular scales.

The profuse, extremely fragrant staminate flowers are produced from late May to early June in the Washington area on 4–10 flowered, pedunculate axillary cymes. Peduncles are 5–10 mm long, and the brittle, terete and slender pedicels are 3–5 mm long. Inflorescence bracts are conspicuous and persistent. Corollas are creamy-white, Yellow-White Group, 158 B, rotate and 4–6 mm in diameter. Four, 1–2 mm long stamens alternate with the corolla lobes and are not exerted. Calyx lobes are acute or obtuse, and are persistent after anthesis, when the corollas and stamens have dropped.

The cultivar name ‘Nakada’ commemorates the Nakada Nursery (Anygo, Kawaguchi, Saitamaken, Japan), the original source of this introduction. The

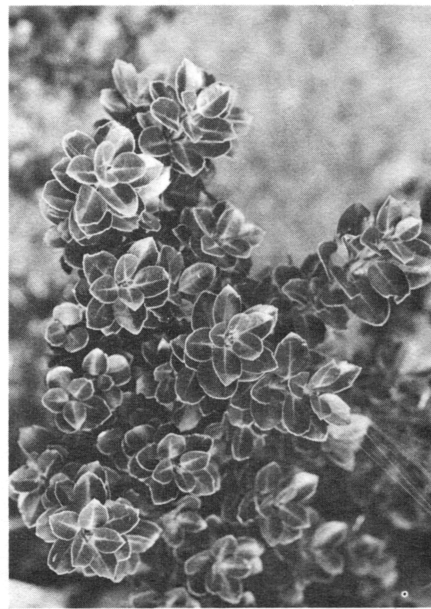
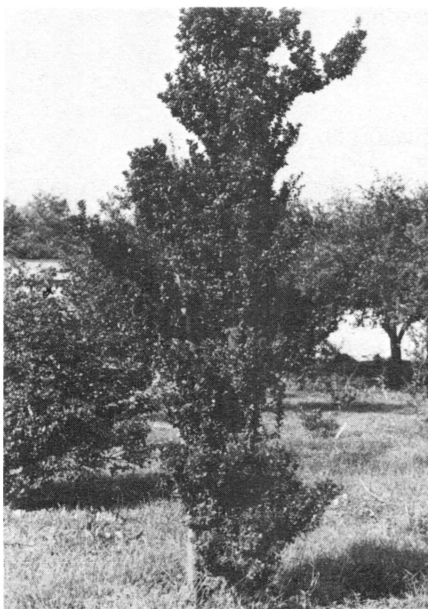


Fig. 1. *Ilex crenata* ‘Nakada’: (left) plant is 2.6 cm tall; (right) foliage ½ natural size.

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living clonotype is cultivated at the U.S. National Arboretum. The cultivar name 'Nakada' is registered with the International Registration Authority for Cultivated *Ilex*, the Holly Society of America. Inc., Registration No. 77-1(6). Voucher herbarium specimens and photographs are deposited in the herbarium of the U.S. National Arboretum.

The characters that distinguish 'Nakada' from all other cultivars of *I. crenata* are: congested and clustered leaves, particularly at branchlet apices and on short shoots; a dwarfed, brachytic growth habit; broadly ovate-elliptic to obovate, or orbicular to suborbicular, tridentate leaves borne on short petioles. There is a tendency for 'Nakada' to be more vigorous than the closely related female clone, 'Mariesii'. The size and shape of the leaves of 'Nakada' are variable and are consistently larger than those of 'Mariesii'; and are predictably more ovate-elliptic to obovate. The apical notches on the leaves of 'Nakada' are deeper and more widely spread, and the terminal teeth are twice the length of the marginal teeth. The petioles and internodes of 'Nakada' are consistently longer than 'Mariesii', especially on the terminal shoots. The pedicels of 'Nakada', how-

ever, are shorter. The corollas of 'Nakada' are 1/4 less in diameter than of the pistillate flowers of 'Mariesii'.

## Culture

*Ilex crenata* 'Nakada' is an excellent landscape subject for sunny or partially shaded sites where an upright, small-leaved, densely foliate, evergreen shrub is desired. The year-around dark green foliage is effective, and the unusual, congested growth habit introduces a desirable quality to the landscape scene. 'Nakada' is very adaptable as container plant, and by virtue of its growth habit is an excellent subject for use in the art of bonsai and rock gardens. *I. crenata* 'Nakada' is not particularly susceptible to insects or diseases. However, in some areas spider mite may be a problem, but not greater than for other clones of *I. crenata*. This selection can be easily propagated by cuttings. Rooting is more rapid, when treated with a rooting hormone and stuck under intermittent mist. *I. crenata* 'Nakada' is hardy in U.S. Department of Agriculture, Hardiness Zone 7 (32°C,) (9), as are 'Mariesii' (pistillate), 'Green Dragon' (staminate) (5) and 'Dwarf Pagoda' (pistillate) (5), the other components of the "Nummularia Group of cultivars.

This ornamental is not yet commercially available. After a stock increase at the National Arboretum, the selection will be introduced and distributed to cooperating platsmen and botanic gardens and arboreta.

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# 'September Gem' Holly<sup>1</sup>

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*Ilex [ciliospinosa* × (*X aquipernyi*)] 'September Gem' is a slow growing, fine textured broadleaved evergreen shrub with showy red fruit. It has a compact, broadly conical habitat that is especially useful for small properties or in limited areas for landscaping. This plant was developed as part of the *Ilex* hybridization program at the U.S. National Arboretum aimed at producing new and superior landscape

plants (1).

## Origin

This new cultivar, National Arboretum Accession No. 28370 and PI 378148 is a tri-specific hybrid originating from a controlled cross of *I. ciliospinosa* Loes., pistillate, obtained in 1954 from a private garden and *I. X aquipernyi* Gable, (= *I. aquifolium* L. × *I. pernyi* Franch.) staminate, obtained in 1955 from Rutgers University. The cross was made in 1957, at the National Arboretum, by William F. Kosar who selected and named this cultivar.

## Description

At 20 years of age, the original plant is 2.1 m tall and wide with a single leader. Habit is similar to the staminate parent

but considerably slower-growing and much more compact than the pistillate parent. Young branches are somewhat ascending and become horizontal with age. Leaves are evergreen, leathery, dark glossy green, 7.7 cm to 11 cm long and 1.6 and 1.9 cm wide, ovate elliptic, cuneate bases, apices taper into a fine pointed prominent spine. Petioles are 0.8 to 10.0 mm long. Blades are keeled and curved with 3 evenly spaced, fine but distinct, soft spines, 0.5 to 1.0 mm long on each side. Fruits are glossy, Red Group 44B (2), and globose, 1.1 cm in diameter and slightly flattened. They are borne singly in the leaf axils of previous-season's wood on very short pedicels, 2 mm long. Even though borne singly and nearly sessile, the fruit is attractively displayed on the plant or when used for cut sprays. It is similar in gloss and size to *I. ciliospinosa* and superior in gloss and brighter red than *I. ciliospinosa* or *I. pernyi*, two of the parental species. Fruit ripening occurs in September in Washington, D.C. which is exceptionally early for an evergreen holly. The name 'September Gem' was derived from the early ripening characteristic. Fruit persistence is superior to two of the parental species, *I. ciliospinosa* and *I. pernyi*.

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