Iris arenaria [*Iris humilis*]

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I. arenaria, Waldstein et Kitaibel [*I. humilis* Georgi], comes under the general heading of *I. flavissima* which is recognized as the representative type, but both much alike in general character except for size. *I. flavissima* is the largest, with *I. arenaria* the smallest. *I. bloudowii* and *I. mandshurica* are intermediate in size.

A peculiarity of this group is that the different forms jump vast areas of space to appear in widely separated populations. *I. arenaria* appears in Hungary, in Transylvania, and then over in the southern Russian territory as the form *I. bloudowii,* then into Manchuria as *I. mandshurica.* I have never seen *mandshurica,* but have grown the other forms.

I. arenaria is among the tiniest of the dwarfs, growing to around 4 inches high, with narrow grassy leaves, slender stalks, ovary at the top of the stem, spathe valves neat and rounded, looking inflated and often scarious at the tips. Usually two buds arise from the spathes in a terminal cluster, which bloom at different periods a few days apart, resulting in waves of blooming, but the flower is short lived, lasting only one day. On hot days, it is over by early afternoon. On a cloudy day, blooms will not appear, as it only opens in sunlight. As the flower declines, it gradually twists into a screw-like formation.

It comes in only one color, a bright buttercup-yellow, with yellow or orange beard. This is a plastid or carotene pigment, with no anthocyanin or flavonols, and is apparently pure breeding for yellow. This suggests *arenaria* is a homozygous species for color.

It seeds itself regularly, so that in all cases if you save open-pollinated pods, you will get true *arenaria* seedlings. In fact, I know of only one case in which *arenaria* is known to have produced a hybrid as the pod parent. This was an *arenaria* X *aphylla* hybrid grown by Dr. Hertha van Nes of Germany. This hybrid is a rosy-lavender self with blue beard, and shows the characteristics from both parents.

I. humilis (arenaria) ex Hungary
photo: Sean Zera

A strong characteristic of the flower is its open standards, with wide and rounded horizontal falls. The bud is a bronzy brown before opening, and this color shows on the underside of the falls after opening. The pod is pointed at both ends, opening on the side when ripe and of a papery substance when dry.

Even as a pollen parent it is difficult with most species excepting *I. chamaeiris* [*I. lutescens*]. It will cross readily with *chamaeiris* to produce hybrids which are sterile. We have two seedlings of *pumila* x *arenaria,* the first and only ones of their kind, called 'Pumar Alpha' and 'Puma Beta', bred by Jay Ackerman. These are nice small plants, very robust, with tiny yellow flowers that are sterile.

Yet we find quite a large number of *chamaeiris-arenaria* hybrids such as 'Tampa', 'Keepsake', 'Tiny Treasure', 'Bronya', 'Mist o' Pink', 'Promise', 'Bricky', 'Cup and Saucer', 'Glow Gleam', and a very old one called 'Ylo', by Miss Sturtevant.

Its habit of self-pollination has evidently been a factor in keeping its gene pool clear. And therefore, considering the handicaps involved, it is advisable to open the bud before the flower opens, take off the stamens, pollinate the flower, and then close the flower and cover to avoid contamination.

I. boudowii, although considered a form of *I. flavissima,* is of an entirely different character than *arenaria* or *flavissima.* Its bloom is more thick and stiff, more coarse in every way, as is the stalk and leaves. It lacks the finish or daintiness of *arenaria.* It appears to be harder to grow and I have difficulty keeping it alive.

All of this group are diploids with a complement of 22 chromosomes, or two sets of 11 chromosomes. It has been claimed by most authorities that *arenaria* is a form of Regelia iris, this conclusion based on the facts of its creeping stoloniferous roots and the aril or white spot on the seed. Yet, on the other hand, we find more characteristics that resemble the dwarf section than favoring the Regelia group. For example, its early blooming, its small size, its wide, rounded horizontal falls, its clear yellow color and lack of anthocyanin colors, its absence of dark beard and brown signal on falls, its lack of fertility with other iris groups, and finally its chromosomal differences.

Simonet found the chromosomes of *arenaria* and *flavissima* so different from Regelias that he removed them from the Regelia section and put them into the Psammiris of Spach, a group in between the Pogon iris and Regelia of Dykes. However, in spite of any possible argument as to classification, we do know that Bryant Fitch crossed *arenaria* with the Regelia *I. korolkowii* and obtained a small hybrid about 6 inches tall showing a brown beard and brown signal spot over a near white base color that is very beautiful. However, it is entirely sterile, which it should not be if *arenaria* is a Regelia form.

One thing I should mention here is regarding germination. The seed of *arenaria* should be planted immediately upon ripening, for if they are allowed to get hard and dry out, they will not germinate the following spring, but will wait for two years to appear. For this reason, handling *arenaria* seed is rather difficult. For that matter, I find many reports of growers finding it hard to keep *arenaria* alive. Here I have no difficulty.

I grow it in open rows in the field, in a rich sandy loam, in full sunlight, and give it no thought. But each year I lift, separate, and transplant it, early enough that it gets established before winter. It tends to die down in late fall so that it appears to be almost dying, but each spring it grows and blooms profusely and is entirely hardy. A bit of compost mixed with the soil will do wonders for performance.