UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF PLANT INDUSTRY,
OFFICE OF FOREIGN SEED AND PLANT INTRODUCTION.

NO. 73.

BULLETIN OF FOREIGN PLANT INTRODUCTIONS.

February 1 to 29, 1912.

NEW PLANT IMMIGRANTS.

(NOTE: Application for material listed in this bulletin may be made at any time to this Office. As they are received they are filed, and when the material is ready for the use of experimenters it is sent to those on the list of applicants who can show that they are prepared to care for it, as well as to others selected because of their special fitness to experiment with the particular plants imported.

One of the main objects of the Office of Foreign Seed and Plant Introduction is to secure material for plant experimenters, and it will undertake as far as possible to fill any specific requests for foreign seeds or plants from plant breeders and others interested.)

GENERA REPRESENTED IN THIS NUMBER.

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PLATE: Prunus avium. Russian cherry.

ABIES NUMIDICA. (Pinaceae.) 32706. Seeds from Babois. Presented by Dr. L. Trabut, Algiers, Algeria. "This tree grows with the cedar (Cedrus atlantica.) It is a very splendid tree, flourishing here at 800 meters elevation." (Trabut.) For distribution later.

CAREX PHYSODES. (Cyperaceae.) 32892. Seed of a sedge from Peshy Kara Kum desert, Turkestan. Presented by Mr. W. W. Mackie, director of the Yaqui Valley experiment station, Esperanza, Sonora, Mexico. "This carex grows abundantly on the loose desert sand of the Peshy Kara Kum desert of southern Turkestan. It produces excellent feed for horses, camels, sheep, donkeys, etc., with less than four inches of rain per annum. It grows only in the loose sand. To protect itself from the elements when the roots are exposed by the winds each root and rootlet gathers about itself a layer of sand several times its diameter, holding it against considerable strain and wear." (Mackie.) This sedge had been introduced earlier by Meyer, who procured it at Chardchui, where it is used in Mr. W. A. Palletzky's sandbinding experiments along the Trans-Caspian railroad. For distribution later.

CITRUS NOBILIS. (Rutaceae.) 32875. Cuttings of the Clementine tangerine from Algiers. Presented by Dr. L. Trabut. "I was very much impressed by the value of the Clementine tangerine which is by far the earliest of the kidglove type except the Satsuma. It is a bright red-orange, medium-sized tangerine with a special flavor and aroma, not however so different from the ordinary tangerine as is the Satsuma. A tree sent to Florida three years ago and planted on the leased orchard at Glen St.Mary showed very marked resistance to cold, probably as much as the Satsuma. Dr Trabut is convinced that it is a hybrid of a tangerine with pollen from the 'granito', a willow-leaved Spanish variety of sour-orange. I do not see any trace of sour-orange in the Clementine, but I must admit that forms very like the 'granito' do appear among its descendants." (W. T. Swingle, in letter of November 30 to Dr. Galloway.) For distribution later.

CLEMATIS SP. (Ranunculaceae.) 32763. Seeds of a clematis from Kozlov, Tambov government, Russia. "A woody, climbing clematis of ornamental value, bearing large yellow flowers, which has proven perfectly hardy in Central Russia. Obtained from Mr. I. V. Mijurin, who stated he had received the seeds from Tibet." (Meyer's introduction.) For distribution later.

CRACCA. (Fabaceae.) 32777-778. Seeds from the Botanical Gardens, Buitenzorg. Procured by Mr. C. V. Piper of this

Department. Two legumes secured along with a number of others as promising plants for green manure crops. For distribution later.

DIOSPYROS SP. (Ebenaceae.) 32863. Cuttings of a wild persimmon from Tangsi, China. Presented by Rev. Alex. Kennedy, through Rev. J. M. W. Farnham, Shanghai, China. These cuttings are supposed to be from the same striking whitebarked variety described in Meyer's bulletin on Agricultural explorations in China, as being used as a stock for the cultivated persimmon in central China, and illustrated in plate III, fig. 1, of that bulletin. For distribution later.

DIOSPYPOS KAKI. (Ebenaceae.) 32748-750, 32864-872, 32886. Cuttings and plants of various Japanese varieties of persimmon from Sapporo, Yokohama, and Hiroshima, Japan. No. 32750 is composed of scions from male persimmon trees, for which special requests have been made, since practically all the trees now growing in this country from imported cuttings produce either female flowers only or male flowers in entirely insufficient numbers to supply an adequate amount of pollen. For distribution later.

FICUS SP. (Moraceae.) 32878. Cuttings of the Isabella fig from Granada, Spain. Received from Mr. Pedro Giraud, at the request of Mr. Wm. A. S. Davenhill, British vice-consul. "This is cultivated extensively, I might say preferably, in and about Granada. It is a medium-sized fig, rounded turbinate, white in color with reddish pulp. In shape it resembles the hirta of Japan with a well set neck. It is an exceedingly good fig, and one of the best table varieties I have tasted. It was ripe in September and we had good fruit yet in November, a long season for any fig. This fig, as far as I know, has not been introduced to California." (Dr. Gustav Eisen, at whose suggestion the cuttings were obtained.) For distribution later.

FICUS ROXBURGHII. (Moraceae.) 32752. Cuttings from the Calcutta Royal Botanical Gardens, Sibpur, Calcutta, India. Presented by Major A. T. Gage, Director. An Indian species with fruits up to $3\frac{1}{2}$ inches in diameter introduced for breeding purposes. For distribution later.

GARCINIA SP. (Clusiaceae.) 32704. Seeds from Inhambane, Portuguese Africa. Presented by Rev. Pliny W. Keys, Methodist Episcopal Mission. "Native name pembe. Either a branched bush, an erect tree, or a bushy tree, in each case the stems set with numerous firm, little, more or less evergreen

branches which give the tree a pyramidal shape. Leaves usually in threes or opposite. Fruit one or two inches long, oblong, edible, yellow at first or when ripe, two seeded, and used by the natives to make a fermented liquor. Abundant in sandy soil through the M'Chopes country to Inhambane." (Sim, Forest Flora of Portuguese East Africa.) Introduced as a possible stock for the mangosteen, Garcinia mangostana. For distribution later.

HORDEUM VULGARE. (Poaceae.) 32767. Seeds of barleys from Rostoff-on-Don, Russia. "A new variety of black summer barley, having smooth awns. It is a decided improvement on the ordinary barleys with their objectionable barbed awns, and especially for feeding purposes. Obtained at the Agricultural experiment station near Rostoff-on-Don through Mr. S. M. Groobnieff, secretary of the Don-Kuban-Tersk agricultural society. This barley seems to do well in regions with rather high summer temperatures and where there is only a relatively slight precipitation." (Meyer's introduction.) For distribution later.

LILIUM SP. (Liliaceae.) 32764. Seeds of a hybrid lily from Kozlov, Tambov government, Russia. "A hybrid lily, originated by Mr. I. V. Mijurin, at Kozlov, bearing large flowers of deep yellow color and being extraordinarily floriferous. Of great promise apparently as an ornamental perennial for the hardy border. Bulbs of this hybrid are stated by Mr. Mijurin to weigh up to 6 pounds apiece." (Meyer's introduction.) For distribution later.

OLEA EUROPAEA. (Oleaceae.) 32880. Cuttings of an olive from Granada, Spain. Received from Mr. Pedro Giraud, at the request of Mr. William A. S. Davenhill, British vice-consul. "Cuatro Hermanos, from Canales. These olives are of good size and early maturity, ripening in November. They occur in fours, sitting close together and forming a cross with four arms on the very stem. It is said to be one of the best olives for both oil and pickling. Olives from this locality are considered some of the hardiest and are suited to districts situated on the limits of possible olive culture, Canales being about 4000 feet above Granada and 6000 above sea level, and subject to heavy winds, heavy frosts and winter snows. Still olive culture is profitable around Canales and every available space of ground is covered with trees." (Dr. Gustav Eisen, at whose suggestion the cuttings were procured.)For distribution later.

PERSEA AMERICANA. (Lauraceae.) 32691, 32842, 32874. Seeds of avocados from the state of Puebla, Mexico, presented

by Mr. William W. Canada, American consul, Vera Cruz, from Guatemala city, Guatemala, presented by Mr. George A. Bucklin, Jr., American consul-general, and of another from Guatemala City, presented by Mr. S. Billow, "said to be the largest and most delicious flavored variety that is grown in Guatemala, in season in February." For distribution later.

PERSEA LINGUE. (Lauraceae.) 32694. Seeds from the state of Puebla, Mexico. Presented by Mr. William W. Canada, American consul, Vera Cruz. A Chilean tree introduced in the effort to secure all species of this genus for breeding purposes. For distribution later.

PERSEA MEXICANA. (Lauraceae.) 32692. Seeds from the state of Puebla, Mexico. Presented by Mr. William W. Canada, American consul, Vera Cruz. Introduced for the same purposes as the preceding. For distribution later.

PHOENIX DACTYLIFERA. (Phoenicaceae.) 32713-725. Suckers of dates from Egypt. Procured through Mr. A. Aaronsohn, managing director, Jewish agricultural experiment station, Haifa, Palestine, from the Department of Agriculture at Cairo. Suckers of thirteen varieties of dates, five of them drying dates from Upper Egypt, all selected by Mr. Aaronsohn during his investigations of the Egyptian date industry in September and October of last year. For distribution later.

PHOENIX DACTYLIFERA. (Phoenicaceae.) 32845-859. Seeds of dates from Gourara, Algeria. Presented by Dr. L. Trabut, Algiers, at the request of Mr. W. T. Swingle, of this Deprtment. Fifteen varieties. For distribution later.

PHOENIX DACTYLIFERA. (Phoenicaceae.) 32894-900. Seeds of seven varieties of dates from Siwa Oasis. Procured by Mr. George J. Salem, Cairo, Egypt. For distribution later.

PISTACIA VERA. (Anacardiaceae.) 32827-828. Seeds of the pistache from Russian Turkestan. Purchased from Mr. Vladimir F. Gnesin, Tashkent. From the northernmost range of this valuable nut tree. For distribution later.

PRUNUS SPP. (Amygdalaceae.) 32757-759. Seeds of plums from Souchodole, Tula government, Russia. Three wild plums, all from the Ussuri district, Eastern Siberia, obtained from Mr. D. D. Kashgaroff at Souchodole. (Meyer's introduction.) For distribution later.

PYRUS COMMUNIS. (Malaceae.) 32733-747. Cuttings of

fifteen varieties of pears from Collegeville, Minn. Presented by Rev. John B. Katzner, superintendent of the Minnesota state horticultural society trial station. All procured from Germany, and well known German varieties, none of which are hardy at Collegeville, but since they showed no signs of blight they may be worth trying in milder regions. For distribution later.

RIBES SPP. (Grossulariaceae.) 32761-762. Seeds of currants from Souchodole, Tula government, Russia. One black and one brownish-black currant, both with fruits of unusual size, one of them of fine flavor. Obtained from Mr. D. D. Kashgaroff. (Meyer's introductions.) For distribution later.

STRYCHNOS SP. (Loganiaceae.) 32705. Seeds of the quaqua from Inhambane, Portuguese East Africa. Presented by Rev. Pliny W. Keys, Methodist Episcopal Mission. "Quaqua. A small tree three to ten meters high, without thorns, and with exceedingly variable leaves. Fruit one celled, globose, five to seven cm. in diameter, small, thin, spotted, with a hard shell, and numerous flat seeds lying in acidulous edible pulp. Abundant from Natal to Inhambane, and especially on sandy soils." (Sim, Forest Flora of Portuguese East Africa.) For distribution later.

TRITICUM SPP. (Poaceae.) 32680-689. Seed of wheats from Argentina. Presented by Dr. Carlos Thays, Director, Botanic garden, Buenos Aires. Ten varieties from various parts of the Argentine Republic, varying widely in yields. For distribution later.

TRITICUM SPP. (Poaceae.) 32765-766. Seeds of wheats from Kharkoff, Russia. Two forms of winter wheat, one bearded and one beardless, both giving abundant crops and standing winter cold and summer heat better than most other wheats. Obtained from Mr .P. V. Budrin, director of the Kharkoff experiment station. (Meyer's introductions.) For distribution later.

ULMUS SPP. (Ulmaceae.) 32829-831. Plants of elms from the Imperial estate "Murgab", Bairam-Ali, Oasis of Merv, Russian Turkestan. Three very remarkably ornamental elms which stand considerable heat and fair amounts of alkali in the soil. These trees form one of the most striking features of the Turkestan landscapes. (Meyer's introductions.) For distribution later.

VITIS VINIFERA. (Vitaceae.) 32879. Cuttings of a grape from Granada, Spain. Received from Mr. Pedro Giraud, at the

request of Mr. William A. S. Davenhill, British vice consul. "Jeresiana. This is the predominant grape in Granada. It resembles the Verdal as grown in California, but is sweeter, though perhaps smaller in size. Its pulp is firm and stands shipment well and the large white bunches seem as perfect after having stood the transportation over country roads as if they had just been picked from the vine. It is a very desirable grape for the table, and one which seems suited to a high altitude. It is also a good bearer, a hardy plant, and altogether a profitable table grape. I have not observed it in California." (Dr. Gustav Eisen, at whose suggestion the cuttings were secured.) For distribution later.

NOTES FROM FOREIGN CORRESPONDENTS.

Mr. Frank N. Meyer writes from Kozlov, Tambov government, Russia Dec. 29, 1911, concerning the work of the foremost Russian plant breeders and referring to material which is sent in:

"All of this material is extremely valuable and represents years of patient work on the part of Mr. I. V. Mijurin, here in Kozlov, who was so kind as to allow me to clip off these twigs which I am herewith sending. He stated however, that he would like to see the source of origin mentioned when we are distributing this material, as his experiences have often been that his own creations have been given new names and been sold as the seller's own products. I trust you will kindly remember these wishes of his. Mr. Mijurin has been described as the Luther Burbank of Russia, and I must confess there is much resemblance between them in their work and methods only the first took a northern locality to pursue his work in and therefore are his products really of more value to the northern states than those of Burbank, and it gives me particular pleasure that I am rounding up this present exploration trip with a few real hardy things.

I will make a few remarks re these numbers.

No. 32662, A hybrid between Amygdalus davidiana and A. nana, is extremely interesting to us, as this plant may afford us a medium by which to create a perfectly hardy peach. Mr. Woeikoff, near Syzran, was wrong when he told me that the plants he had were hybrids between A. persica and A. nana, and I was right in my remarks that they looked strikingly like A. davidiana.

No. 32663, An apricot, standing the severe climate of Central Russia, is something marvellous! The tree does not seem to be a vigorous grower, but maybe we can develop better strains by selection and hybridization.

Nos. 32664 and 32665, Forms of the extremely interesting Siberian cherry, of which I personally think that it will play in the future, a much greater role in the northern states than Prunus besseyi will do. We probably will develop large, sweet fruited varieties and they will be home fruits par excellence.

No. 32666, A sweet-fruited hybrid Sorbus; is said to be much superior to the ordinary sweet-fruited rowan (Sorbus aucuparia fructi dulcis). Mr. Mijurin has much faith in it as a fruit for the far north.

No. 32667, A large fruited, edible form of Ribes aureum; is certainly valuable to us, as this species of currant thrives in very sandy soil even and is much more drouth resistant than the red or black currant.

No. 32668, A hybrid rose of unusual hardiness, shows that native, wild forms of various flowering shrubs may be employed with success in hybridization experiments.

The Nos. 32669-673, Hybrid plums in which the ordinary wild sloe, Prunus spinosa, has played a big role. Mr. Mijurin stated that it is his firm belief that in the future this sloe will be employed very much in hybridization experiments and that we may expect some wonderfully fine results thereof. P. spinosa bequeaths to its offspring a host of desirable qualities: firstly, a remarkable spicy flavor in the fruits,2d, great keeping and shipping qualities, 3d, great prolificness, 4th, wonderful hardiness, 5th, powers of being able to thrive on very poor and dry soils even, 8th, a great freedom from diseases in general, 7th, a good root system, and 8th, not growing too rank or too large. What have we done in America with this plum? Are Mr. Mijurin's observations corroborated by our breeders also? What I personally have seen of this wild sloe, I should say that it will not give good results in the Atlantic coast states, but that out in the Northwest it ought to thrive to perfection. I do not think it will ever be a success in regions where there is a protracted period of moist heat, like we so detrimentally experience in nearly the whole of the eastern United States.

No. 32674, A remarkable variety of cherry, possessing so many good qualities, that I suppose it has been introduced already in America. (See half-tone.)

No. 32675 and 32676, A round and oblong fruited variety of quince and most probably some of the hardiest quinces in existence!

There were several other interesting things at Mr. Mijurin's place, which I think I had better mention here.

Mr. Mijurin told me that in his attempts to create a hardy peach, he had peach kernels sent in from many different regions. These he sowed and had at one time 30,000 young trees, then the Russian winter came and thinned them out so

that after 3 years only 15 specimens remained. These he took care of and budded on Prunus spinosa, but some peculiar disease came and killed them one after the other. It was bark rot, he said, that formed a blak ring right around the little trunk close to the ground. Now he is hunting for peaches from the northernmost limits and at the same time has made hybrids between Amygdalus hybrida and Elberta peaches and others. The plants he obtained are 2 years old now and resemble Amygdalus nana more than A. persica; the fruits, however, may be different. I was not shown these little trees, for they were covered up, being too valuable to be left unprotected.

Mr. Mijurin further has hybridized pears extensively and seems to have obtained some really important forms, able to stand much more cold than the ordinary types.

In apples I also noticed many hybrids , not only Malus sylvestris x M. prunifolia, but also M. sylvestris x M. medwietzkyana and with M. baccata. Some seem to be good, but the greater part are of course valueless. The M. medwietzkyana hybrids were interesting, as half of them were red-wooded and half white-wooded and one specimen was half red and half white. Then there were hybrids between Prunus prostrata and P. spinosa; between P. insititia and P. chamaecerasus,between P. domestica and P. spinosa and various crosses between all these species.

I also heard that Amygdalus davidiana freezes in Kozlov and also Prunus sibirica from Nertchensk! This last information came as a shock to me, for who would expect a plant from the Transbaikal territory to be tender in Central Russia? Nearly all plants from Manchuria also freeze in Kozlov, it isn't the wood that gets hurt, no, it is the young growth which gets caught by the late spring frosts and from which these Manchurian plants never recover.

Mr. Mijurin stated that Wladimir cherries are in little favor with Russian fruit growers, for they only do well in Wladimir and when tested in other regions, they decline in vigor and the fruits become smaller and ultimately the plants succmmb. If this is correct, we will have to develop types suited to various localites.

Then Mr. Mijurin has been hybridizing American blackberies with wild Russian forms and obtained some fine forms. And the same with American grapes and Caucasian, and he stated that he possesses a hybrid of Vitis vinifera, "Dendrelabi" x V. riparia, that possesses the hardiness of the last and has very large fruits. The state in which his garden was showed the observer that more work has been undertaken than profitably could be disposed of and in case some sudden accident should befall Mr. Mijurin most of the material would disappear without people knowing what it really was. Mr. Mijurin

invited me to come back in summer, as he had several interesting things yet that were covered up now and I think it would almost pay me to make an extra trip to see him."

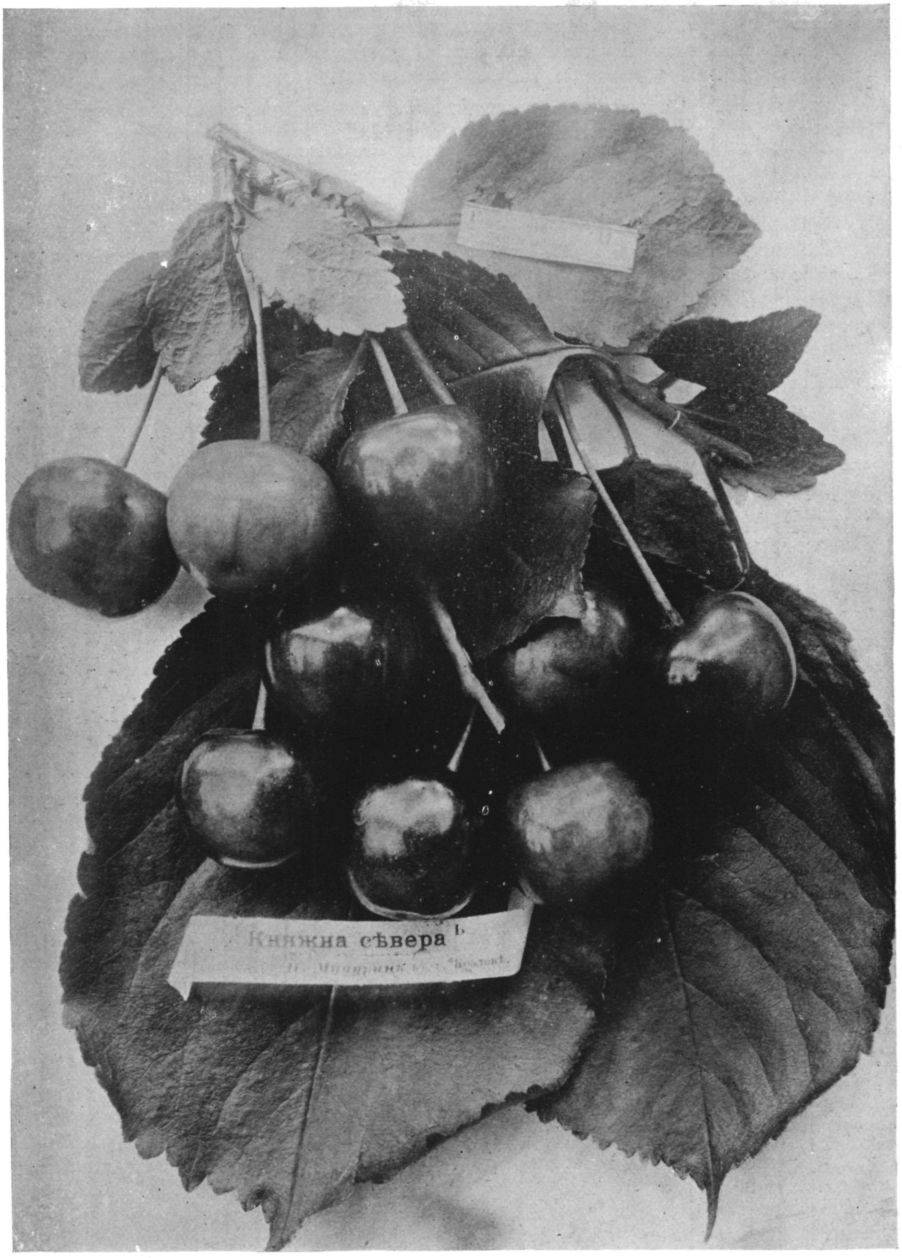
SPECIAL NOTE.

Mr. Frank N. Meyer, our Agricultural Explorer, has just returned from Siberia after spending nearly two and one half years of considerable hardship in the field. His explorations have taken him through a region which resembles our great Northwest and while the plants which he has found and introduced may not be quite as novel as those which he brought back from his Chinese expedition, there is quite a good chance that some of them will prove perfectly hardy in the Northern States and be of greater interest to experimenters there than plants from the milder region of China.

It is expected that Mr. Meyer will be in this country for the season at least and will visit the collections of his plants which are now growing at various places.

His seeds and plants are now being propagated at our Plant Introduction Gardens and will be available for experimenters in the course of one or two years.

(Issued May 4, 1912.)



PRUNUS AVIUM. RUSSIAN CHERRY. S.P.I. No. 32674.

A large-fruited variety of cherry, of fresh sour-sweet flavor, originated in 1888 by the Russian plant-breeder, Mr. I. V. Mijurin, at Kozlov, Tambov government, central Russia, and named by him "Knyasnaia Sjevera" meaning "Queen of the North." Said to be a hybrid between an early Wladimir cherry and a variety of sweet cherry called "White Winkler." Has stood the severe winters of central Russia very well and may be expected to thrive in the greater part of the Middle West, and more especially in those sections where the climate is more or less semi-arid. See Plant Immigrant Bulletin No. 72 for further description. From photograph presented by Mr. Mijurin.