

Flora of Dye Plants

Information reported on this Flora are:

Species name (Roskov et al., 2019), Family name (Roskov et al., 2019), habitat and Italian locality where the species can be found or where they have been reported (Pignatti et al., 2019), altitudinal range and chorology (Pignatti et al., 2019), chromosome numbers (if known) (Pignatti et al., 2019; Tropicos, 2020), pigment color and pigment sources (Briganti, 1842), Herbarium voucher (Index Herbariorum acronym, and voucher number).

Species are listed in alphabetical order. The frequency of the species on the Italian territories are reported with: RR (very rare), R (rare), C (common), CC (very common) (Pignatti et al., 2019).

Abies alba Mill.

Pinaceae

Mountain woods in the beech belt. Alps and Apennines up to Aspromonte: C, but with large gaps; elsewhere frequently cultivated (400-1800 m).

2n=24

Brown: young branches

Black: soot

H.PAOL – 2207

Acanthus mollis L.

Acanthaceae

Arid fallows, bushes. Liguria, Peninsula (especially along the coasts), Sicily, Sardinia, and smaller islands: C. (0-700 m). Steno-Mediterranean-West.

2n=80

Yellow: grass

PAL – 77570

Acer campestre L.

Sapindaceae

Mesophilous woods, on rich soil; also, commonly cultivated in hedges and vineyards. In the whole territory, however, it is lacking in the high mountains and in the most arid areas of the Mediterranean: C; in Sardinia, it is lacking in the spontaneous state. (0-800, in Sicily up to 1600 m). European-Caucasian (Subpontic).

2n=26

Red: fresh wood, bark

PAL – 69273

Acer opalus subsp. *obtusatum* (Waldst. & Kit. ex Willd.) Gams

Sapindaceae

Broad-leaved woods, especially *Quercus cerris*' woods. Peninsula from Southern Lazio, Molise, and Gargano to Calabria: R. (500-1300 m). Endemic.

2n = unknown

Red: bark

PI - 010548

Acer pseudoplatanus L.

Sapindaceae

Mountain woods, especially beech woods. Alps, northern and central Apennines (including minor reliefs): C; Padania, southern Apennines, and northern Sicily: R. (500-1500, rarely 0-1900 m). European-Caucasian.

2n=52

Red: bark
PAL – 70480

Actaea spicata L.

Ranunculaceae

Mountain woods, especially beech woods. Alps and Apennines up to Sila: C. (400-1500, max 1900 m). Eurasian tempered.

2n=16

Black: berries' juice

PAL-GR – 100306_GR

Aesculus hippocastanum L.

Sapindaceae

Commonly cultivated for ornamentation. In the whole territory area, sub-spontaneous, especially in northern and central Italy (50-1300 m). Balkan.

2n=40

Yellow: bark, young branches, leaves

NYBG - 2497668

Aesculus pavia L.

Sapindaceae

Exotic, native species in the USA from Illinois to Missouri.

Yellow: bark, young branches, leaves

NYBG - 1269329

Agrimonia eupatoria L.

Rosaceae

Woodland margins, meadows, and pastures, fallows. (0-1000, rarely 1500 m). Sub-Cosmopolitan.

2n=28

Yellow: leaves, stem

PAL – 76608

Alcea rosea L.

Malvaceae

Cultivated for ornament. Reported as sub-spontaneous in northern Italy, Tuscany, Lazio, Abruzzo, Basilicata, Sicily, and Sardinia, but in general due to confusion with *A. setosa* (0-800 m). Unknown origin.

2n=26

Red: flowers

PAL – 85348

Alkanna tinctoria Tausch subsp. *tinctoria*

Boraginaceae

Arid fallows, sandy, or rocky. Liguria, Molise, Puglia, Basilicata, Calabria, Sicily and Sardinia: R. (0-600 m). Steno-Mediterranean.

2n=30

Red: roots

Yellow: leaves

PAL – 72291

Allium cepa L.

Amaryllidaceae

Bulbous herbaceous plant, cultivated since ancient times. Random archaeophyte in different regions of the Italian Peninsula. W-Asiatic

2n=16

Red: cataphyll

NYBG - 1504442

Alnus cordata (Loisel.) Duby

Betulaceae

Gorges and mountain woods (oak, chestnut, beech). Southern Apennines from the Neapolitan to the Sila (especially on the Tyrrhenian side): C; also on the Majella in Pretoro, Elba (spontaneous?); doubt in Sardinia; cultivated in the Prealps in the province of Pordenone, Belluno, on the Garda and in the northern Apennines (Campigna, Futa). (0-1500 m). Endemic.

2n=unknown

Red: inner bark

Yellow: bark, cones

Green: catkins

PAL – 107986

Alnus glutinosa (L.) Gaertn.

Betulaceae

Woods and bushes on the banks of streams and on peaty, asphyxial soils. In the whole territory, in the North: C; in the South: R. (0-800, rarely 1200 m). Paleo-tempered.

2n=28

Red: bark

Yellow: leaves, bark, young branches

Brown: bark

Black: cones

PAL – 68228

Amelanchier ovalis Medik.

Rosaceae

Sparse woods, on slopes and also on rocky places with limestone soils. Whole territory: R. (0-2200 m). Mediterranean

2n=34, 68

PAL – 68226

Amorpha fruticosa L.

Fabaceae

Pebbly shores and river beds. Cultivated and feral in northern, central, and southern Italy, and in Sardinia: C; of American origin, it was introduced in 1850, first in the North, and now expanding throughout the territory; missing in Sicily. (0-600 m). N-American.

2n=40

Blue: tender shoots, leaves

PAL – 97055

Anagyris foetida L.

Fabaceae

Spots and cliffs (calcareous). Southern Italy (north to Gargano and Naples), Sicily and Sardinia: C; northwards it radiates on the Adriatic side up to the Marche in Fabriano, on the Tyrrhenian side up to the Alban Hills, Tuscany in Follonica and Magliano, Liguria in Varigotti. (0-1100 m). South Mediterranean.

2n=18

Yellow: leaves

PAL – 26

Anchusa ochroleuca M. Bieb.

Boraginaceae

Ruins, ferrivia embankments, torrential beds. Spotted from 1893 to 1930 in Trieste (S. Elia Draga Station) and from 1893 to 1914 in the Frigido stream bed in the province of Massa, but in both cases, it was no longer found and probably to be eliminated from the Italian Flora. (0-300 m). E-European.

2n=16

Red: roots

Green: leaves

Blue: flowers

VHLVB - 10 0841337

Anemone nemorosa L.

Ranunculaceae

Broadleaf woods. Alps: C; Padania. Spontaneous everywhere, but mostly disappeared due to the crops; Peninsula, above all on hills, in the South up to Pollino: C. (0-1500 m).

2n= (16, 24), 30, (45)

Yellow: leaves

PAL-GR – 100303_GR

Angelica archangelica L.

Apiaceae

Allochthonous casual in the gardens where it is cultivated. Alps in Lombardy: R. Not confirmed recently in Emilia, Tuscany, and Abruzzo (500-1400 m). E-European and Siberian, archaeophyte.

2n=22

Yellow: leaves

NYBG - 3365663

Angelica sylvestris L.

Apiaceae

Wet woods and ravines. Throughout the national territory (dubious in Puglia and Sardinia): C. (0-1600 m). Euro-Siberian.

2n=22

Yellow: roots, leaves, stem

PAL – 21266

Anthemis cotula L.

Asteraceae

Uncultivated, ruins, cereal fields. In the whole territory, however, in the Po Valley it lacks or ephemeral adventitia and generally on the Alps in the valley floor or dry sunny slopes: C. (0-1300 m). Euri-Mediterranean.

2n=18

Yellow: leaves, stem

PAL – 28876

Anthriscus cerefolium (L.) Hoffm.

Apiaceae

Allochthonous casual or sometimes naturalized near the cultivated and uncultivated. Remnant of ancient crops in continental Italy (with large gaps, often missing) and Sardinia. (0-1000 m). Eurasian (archaeophyte).

2n=18

Yellow: leaves, green stem

NYBG - 3366383

Anthriscus sylvestris (L.) Hoffm.

Apiaceae

Ruined orchards and woodland environments. In much of continental Italy, but often confused with *A. nemorosa*. (0-1500, rarely 2200 m). Paleo-tempered.

2n=16

Yellow: umbels

Green: grass

PAL – 97825

Anthyllis vulneraria L.

Fabaceae

Northern European plant that does not exist in Italy in the spontaneous state. N-European.

2n=12

Yellow: grass

Blue: flower

PAL – 83445

Antirrhinum majus L.

Plantaginaceae

Cliffs, rocks, rubble, and walls. Cultivated by ornament and sub-spontaneous throughout the territory: R. (0-800 m). W-Mediterranean.

2n= 16, 24

Yellow: stem, flower

PAL – 43139

Apera spica-venti (L.) P.Beauv.

Poaceae

Infesting wheat crops on siliceous sandy soil. Padania: C; Basilicata and Calabria: R: reported once in Sardinia. (0-1000 m). Euro-Siberian.

2n=14

Green: spike

PAL – 96903

Arctium lappa L.

Asteraceae

Uncultivated, ruins, edges of roads, hedges. Widespread throughout the territory, but often confused with *A. nemorosum*. (0-1100 m). Eurasian.

2n=36

Yellow: roots, leaves

PAL – 96903

Arctostaphylos uva-ursi (L.) Spreng. subsp. *uva-ursi*

Ericaceae

Mountain and subalpine pine forests, rhododendron bushes. Alps, from the Giulie to the Maritime and the Abruzzese Apennines: R; in the rest of the Apennines from Liguria to Salerno: RR. (600-2500 m). Circum-Arctic-Alpine.

2n=52

Red: roots, whole plant

Grey: leaves

Black: leaves

PAL – 102655

Aristolochia clematitis L.

Aristolochiaceae

Woodland margins and uncultivated on damp soils, often sandy, rich in nitrates. Northern and central Italy, south to Ostia, Maiella and Giulianova: C; Puglia province of Bari and Sicily on the Nebrodi: R. (0-1400 m). Euri-Mediterranean.

2n=14

Yellow: leaves, stem, flower

PAL – 89661

Arnica montana L.

Asteraceae

Pastures, rhododendron moors, dry meadows, always on acid soil. Alps from Gorizia to Cuneese, Piedmontese and Pavese Apennines: C; on the Piacentino Apennines and Parmigiano: R. (500-2200, in Friuli up to the plain, in the Lombard Alps up to 2650 m). Central European orophyte.

2n=38

Yellow: leaves

PAL-GR – 54405_GR

Artemisia absinthium L.

Asteraceae

Arid uncultivated, hedges, walls. Northern Italy and the Peninsula as far as Basilicata, Tremiti, in the arid hilly belt: C, missing in the Padania almost everywhere. (0-1100 m). Sub-cosmopolitan.

2n=18

Yellow: pulverized dry stem

PAL – 107797

Artemisia dracunculus L.

Asteraceae

Cultivated as a condiment and sub-spontaneous in the vegetable gardens. Sarmentico-Siberian.

2n=18 (36, 54, 87-90)

Yellow: woody stem

NYBG - 1893763

Artemisia vulgaris L.

Asteraceae

Uncultivated, rubble, generally synanthropic. In the whole territory; Padania: CC, rest of northern Italy: C, elsewhere R. (0-1000, in Livigno up to 1800 m). Circumboreal.

2n=16

Yellow: stem

PAL – 9364

Arum maculatum L.

Araceae

Beech woods, clearings, coppices. Northern Italy, Peninsula, (on the reliefs): R; the indications for Sardinia are probably due to confusion. (0-1600 m). Central European.

2n=56

Yellow: leaves

PAL – 79278

Asarum europaeum L.

Aristolochiaceae

Broad-leaved woods on neutral and well-humidified soil. Alps and Northern Apennines: C; Lazio, Abruzzo to the Gran Sasso, Campania and Basilicata to the Lake of Sirino, northern Calabria: R. (0-1500 m) Euro-Siberian.

2n=26

Brown: whole plant

PAL – 89613

Asclepias syriaca L.

Apocynaceae

Cultivated by fiber and naturalized in damp woods and hedges. Riparian forests of the Ferrara area: C; also in the Trieste, Veneto, Trentino, and provinces of Brescia, Pavia, Parma and Piedmont. (0-200 m). N-American.

2n=22

Green: leaves, stem

NYBG - 2281009

Asperula arvensis L.

Rubiaceae

Fields, dry pastures, uncultivated. In the whole territory; Liguria Peninsula (north to the Via Emilia) and Islands: C; Padania and southern slopes of the Alps: R. (0-1500 m). Euri-Mediterranean.

2n=22

Red: roots

PAL – 59262

Asperula cynanchica L.

Rubiaceae

Dry meadows and pastures, stony (preferably calcareous). In the whole territory: C; in the alluvial plains, it is missing or R. (0-1000, rarely 2000 m). Euri-Mediterranean.

2n= 20, 40

Red: roots

PAL – 60597

Asperula laevigata L.

Rubiaceae

Thermophilic broadleaf woods. Liguria, Peninsula, Sicily and Sardinia: R. (0-1500 m). W- and Central-Mediterranean.

2n=22

Red: roots

PAL – 62491

Asperula purpurea (L.) Ehrend.

Rubiaceae

Stones, cliffs, calaches and pastures. Eastern Alps and pre-Alpine reliefs from the Trieste Karst to the Insubria: C; in the western Alps, generally R; Cuneo, Liguria, Central Italy and Campania up to Alburno: C. (0-1400 m). SE-European orophyte.

2n=22

Red: roots

H.PAOL - 2614

Asperula taurina L.

Rubiaceae

Mesophilous broad-leaved woods (oak, linden, beech). Apennine system from Liguria to Sila: C, advances northwards to via Emilia, Langhe, southern slopes of the Alps from Gorizia and Friuli to Piedmont: R. (100-1700 m). S-European orophyte. and SW-Asian.

2n=22

Red: roots

NYBG – 3358415

Asperula tinctoria L.

Rubiaceae

Woods, deciduous forests. Lazio on the Alban Hills: R; Also, reported in Trieste and Venice (perhaps disappeared), Moldovì and Parmigiano. (0-600 m). European.

2n= 22, 44

Red: roots

NYBG - 3358418

Asphodeline lutea (L.) Rchb.

Asphodelaceae

Arid and stony slopes. Southern Italy and Sicily: C; Tuscany (Uccellina, Argentario), Marche, Lazio (Circeo, Monte Autore, Tivoli and Monte Guadagnolo), Abruzzo, Sardinia: R. Also in Istria, but outside the Italian territory. (0-1700 m). E-Mediterranean.

2n=28

Yellow: green capsule

PAL – 67933

Asphodelus aestivus Brot.

Asphodelaceae

Uncultivated dry, pastures, garrigues (often on acid soil). Liguria, Peninsula, above all on the western slope in Tuscany, Lazio and in all Southern Italy, in land up to Norcia; on the Adriatic coast, perhaps only in Puglia, in the nineteenth century sighted in Pesaro, but later disappeared, Sicily, Sardinia, and the smaller islands: C. (0-1200 m). Steno-Mediterranean.

2n=28

Yellow: green capsule

PAL-GR – 51869_GR

Aster amellus L.

Asteraceae

Bushes, coppices, at the edge of the woods (calcareous). Northern Italy in the hills and low mountains (no longer found in Liguria): R; Central Italy: Marche (at the Furlo, near Sarnano and Senigallia); Umbria, no longer found in Tuscany. (0-800 m). Central European-S-Siberian (Subpontic).

2n=18

Yellow: stem, dry flower

PAL – 27222

Atriplex hortensis L.

Chenopodiaceae

Uncultivated, ruderal environments. Naturalized in Emilia Romagna and Abruzzo; casual In Northern Italy, Marche, Umbria, Basilicata, and Sicily; no longer found in Lazio and Tuscany. (0-600 m). Temperate Asia. (Archaeophyte).

2n=18

Yellow: leaves, stem

PAL – 90384

Atropa belladonna L.

Solanaceae

Humid clearings, coppices, brightened deciduous forests (especially beech woods, rarely oaks). In the whole territory: R; it is almost everywhere in Padania (perhaps disappeared due to land reclamation and crops) and in the Mediterranean area. (0-1400, in Sicily up to 1800 m).

Mediterranean mountain.

2n=72

Green: berries

PAL – 68490

Ballota nigra L.

Lamiaceae

Ruins, uncultivated, hedges (nitrophilous). In the whole territory: C. (0-1300 m). Euro-Mediterranean. (perhaps archaeophyte).

2n= 20, 22

Green: stem, flower

PAL – 15642

Barbarea vulgaris (L.) W.T. Aiton

Brassicaceae

Wet mud, uncultivated, banks of streams. In the whole territory excluded Puglia and Calabria (perhaps only not observed): R. (0-1600 m). Eurosiberian become Cosmopolitan.

2n=16

Green: leaves

PAL – 76659

Basella alba L.

Basellaceae

Rarely cultivated. SE-Asia, Africa, America.

2n=48

Purple: berries

NYBG - 919326

Berberis vulgaris L.

Berberidaceae

Arid slopes, pine forests, degraded sub-Mediterranean forests. Alps, from the Giulie to the Marittime and Carso Triestino: C; Padania and Peninsula up to Macerata and Spoleto: R, also in Abruzzo (Gran Sasso, Sirente, Pizzoli, Marsica), Lazio in Civita Castellana and the province of Rome, Cuma, Gaeta, Avellino, Vulture, A. of Latronico, Muro Lucano, Pollino. (100-2000 m). Eurasian.

2n=28

Yellow: roots, bark, wood

PAL – 99159

Beta vulgaris L. subsp. *vulgaris*

Amaranthaceae

Spontaneous on the coasts and commonly cultivated. (0-600 m). Euri-Mediterranean.

2n=18

Red: roots

PAL – 108211

Betonica officinalis L.

Lamiaceae

Dry meadows, pastures, nardeti, molinieti. In the whole territory excluding the Padania and the Islands: C. (0-1800 m). European-Caucasian.

2n=16

Yellow: leaves, flowery stem

PAL – 37060

Betula pubescens Ehrh. var. *pubescens*

Betulaceae

Marsh woods, peat bogs: in the Italian Alps, it is a very rare species, the most frequent are the hybrids *B. pendula* x *pubescens*. Alps, from the Carso to the Val Susa and Val Pellice, Val Chisone and Val Pesio, the Parmesan Apennines: R. (600-2150 m). Eurosiberian.

2n=56

Red: branches, wood, bark

Yellow: leaves

PAL – 88760

Bidens tripartita L.

Asteraceae

Ditches, marshes, muddy lands, radurae of the alveale woods. Friuli, Trentino, South Tyrol, Lombardy, Piedmont, Val d'Aosta, Emilia Romagna, Marche, Umbria, Abruzzo and Sicily: R. (0-800 m). Eurasian.

2n=48

Yellow: stem, leaves

PAL – 108433

Bistorta officinalis Raf. subsp. *officinalis*

Polygonaceae

Fertilized meadows in the subalpine belt and other stations with soil rich in nitrates. Alps and Apennines up to Calabria: C. (900-2000 m). Circumboreal.

2n=24

Red: roots

NYBG - 3063394

Borago officinalis L.

Boraginaceae

Fields, uncultivated, ruins, roadsides. In the whole territory: C. (0-800, rarely 1400 m). Euri-Mediterranean.

2n=16

Yellow: leaves, flowery stem

PAL – 87644

Bromus secalinus L.

Poaceae

Infesting cereal crops, especially wheat and rye. Northern Italy, Peninsula up to Basilicata: C. (0-1200 m). Eurosiberian.

2n=28

Green: grass, spike

PAL – 32461

Broussonetia papyrifera (L.) Vent.

Moraceae

Cultivated and naturalized in ruderal environments. In the whole territory: C. (0-600 m). East Asia.

2n=26

Yellow: branches

NYBG - 2512306

Buglossoides arvensis (L.) I.M.Johnst.

Boraginaceae

Cultivated or uncultivated grassland areas, pastures. In the whole territory: C. (0-1800 m). Euri-Mediterranean.

2n=28

Red: roots

PAL – 68453

Buxus sempervirens L.

Buxaceae

Broad-leaved thermophilous woods, cliffs, stony ground. Spontaneous only in the western Alps and northern and central Apennines up to the Alban Hills and Abruzzo and Campania: R; isolated stations in Carnia; commonly cultivated in gardens throughout the territory and often wild. (0-800 m). Sub-Mediterranean-Subatlantic.

2n=28

Green: leaves, branches

PAL-GR – 65582_GR

Calendula arvensis L.

Asteraceae

Uncultivated, edges of streets, fields, and vineyards. In the whole territory (excluding Val d'Aosta): C; anciently reported in Trentino and southern Tyrol (0-600 m). Euri-Mediterranean.

2n= 36, 44

Yellow: petals, flowery grass

PAL – 83716

Calendula officinalis L.

Asteraceae

Cultivated for ornamentation and commonly feral. Northern Italy (excluding Trentino, southern Tyrol, Lombardy, and Val d'Aosta), central and southern Italy (not reported in Calabria): R. (0-600 m). W-Mediterranean.

2n=28, 32

Yellow: petals, flowery grass

PAL – 83724

Callistephus chinensis (L.) Nees

Asteraceae

Gardens, shores, rubble. Random in northern Italy (citations for Friuli, Lombardy, Piedmont, Val d'Aosta, Emilia Romagna): R. (0-500 m). Mongolia, China, E-Asia.

2n= 18, 36

Yellow: leaves, stem

NYBG – 2447903

Calluna vulgaris (L.) Hull

Ericaceae

Moors, lean pastures, bushes, coniferous forests, always on highly acidified soils. Alps, Northern Apennines: C; Padania and central Apennines up to the Marche, Umbria and northern Lazio in Monte Rufeno: R. an isolated station in Calabria, in Serra S. Bruno (0-2000, max 2750 m). Euro-American Circumboreal (Anfi-Atlantic).

2n=16

Red: branches

Yellow: whole plant

PAL – 89217

Caltha palustris L.

Ranunculaceae

Wet meadows and banks of waterways. Northern Italy: C (in Padania, however, sometimes absent); Tuscan-Emilian Apennines, Umbria, Pontine Marshes, Fondi Abruzzo, Basilicata, Sila; Sardinia on Mount Tuttavista. (0-2000, max 2530 m). Circumboreal.

2n=32, 53-62

Yellow: flower, grass

PAL-GR – 100368_GR

Campanula pyramidalis L.

Campanulaceae

Cliffs and rocks (calcareous). Carso Triestino and Gorizia, eastern Friuli up to Gemona: R; naturalized on the walls in Veneto and Bresciano (0-600 m). Illyrian.

2n=32

Yellow: flowery stem

PAL – 39970

Campanula rotundifolia L.

Campanulaceae

Meadows, stony slopes, walls, cliffs (acid substrates, rarely on limestone). Alps from Gorizia to Susa Valley: C; Tuscan Apennines: R. (100-2000 m). N- and Central-European.

2n= 34, 68, 102

Green: leaves, flowery stem

Blue: flower

PAL – 40209

Campsis radicans (L.) Bureau

Bignoniaceae

Cultivated by ornament and sub-spontaneous on old walls. Lombardy, Langhe, Colli Emiliani, Lazio: R. (0-600 m). N-American.

Red: branches

NYBG - 2456451

Canna indica L.

Cannaceae

Cultivated widely for ornamentation and sub-spontaneous in various coastal regions (Liguria, Tuscany, Lazio etc.); already reported in Sicily in Syracuse. Pantropic of Neotropic origin.

2n=18

Red: seeds

PAL – 86651

Cannabis sativa L.

Cannabaceae

Cultivated mainly in Romagna and in the Neapolitan area for fiber, throughout the territory in the vegetable gardens for seed and rarely sighted (0-800 m). Central Asian.

2n= 20, 40, 80

Yellow: grass

PAL – 86004

Capsella bursa-pastoris (L.) Medik.

Brassicaceae

In the uncultivated and cultivated. In the whole territory, northern Italy: CC; Peninsula and Islands especially on the reliefs. (0-1800, max 2600 m). Cosmopolitan (Sinantropic).

2n=32

Yellow: plant, seeds, leaves

PAL – 5917

Capsicum annuum L.

Solanaceae

Cultivated for food in many varieties, throughout the territory, but does not tend to spontaneously become. S-American.

2n= 24, 36

Yellow: leaves, stem, fruit

PAL – 107838

Carpinus betulus L.

Betulaceae

Mesophilic woods. Together with *Quercus robur* in the plains, more rarely in the hills, but only on moist, rich, well humified ground: it formed climatogenic forests in Padania (today largely destroyed). Alps and Peninsula on the reliefs: C; it goes down to the sea in the Maremma and Agro Pontino; missing in the Islands. (0-1200 m). Central European-Caucasian.

2n=64

Yellow: bark

PAL – 88725

Carthamus lanatus L.

Asteraceae

Uncultivated arid, olive groves, vineyards, on clays. In the whole territory: C; progressively rarer in the North. (0-1300 m). Euri-Mediterranean.

2n=22

Yellow: flower

PAL – 10970

Carthamus tinctorius L.

Asteraceae

Uncultivated, along the streets. Random in Trieste, Veneto, Piedmont, and Umbria; ancient indications in Emilia Romagna and Tuscany. (0-600 m). Temperate Asia.

2n=24

Red: flower

Yellow: stamens

PAL – 10907

Castanea sativa Mill.

Fagaceae

Woods, generally on acid soils. In the whole territory, C on the reliefs (but R on limestone), absent in the alluvial plains; missing in Padania. (0-1200 m). SE-European.

2n=24

Brown: bark, wood, fruit rind

PAL – 69497

Catalpa bignonioides Walter

Bignoniaceae

Cultivated by ornament and sub-spontaneous in ruderal environments and along the streets. Colli Veneti, Adige Valley up to Bolzano, Lombardia: R. (0-600 m). N-American.

Red: branches

NYBG - 2584060

Celosia argentea L.

Amaranthaceae

Ruderal environments (cultivated for ornament, sometimes escaping from cultivation). Distribution to be defined, excluded from Piedmont and Tuscany. Asia Tropical.

2n=72

Red: flower

NYBG – 1374124

Celtis australis L.

Ulmaceae

Arid woods on limestone. In the whole territory: C, however, frequent only as cultivation and naturalization. (0-800 m). Euri-Mediterranean.

2n=40

Yellow: branches, bark

Brown: wood

PAL – 69687

Centaurea benedicta (L.) L.

Asteraceae

Fields at rest, uncultivated. Tuscany, Campania, Puglia and Sardinia; considered alien in Molise; dubious in Lazio and Abruzzo (perhaps as a remnant of ancient crops; medicinal plant). (0-800 m) W-Mediterranean.

2n=18

Yellow: leaves

VHLVB - 10 0635234

Centaurea cyanus L.

Asteraceae

Cereal fields. In the whole territory: from R to C. (0-1500 m). Sub-cosmopolitan.

2n=24

Blue: flower

PAL – 10735

Centaurea jacea L.

Asteraceae

Bushes, pine forests, arid scrubland. In all the territory except Sardinia. (0-1000 m). Eurasian.

2n= 22, 44

Yellow: grass

PAL – 69110

Centaurea nigra L.

Asteraceae

Woodlands, hedges, clearings, pastures. Western Alps from Valsesia to Liguria; also suitable for the Tuscan-Emilian Apennines, mountains of Lazio and Abruzzo, but probably by mistake: R. (100-1500 m). W-European.

2n= 22, 44

Green: leaves, stem

PAL – 31437

Centaurea solstitialis L.

Asteraceae

Uncultivated, vineyards, along the streets. In the whole territory; Liguria, Peninsula (north to via Emilia), Sicily, Sardinia, and smaller islands: CC; southern edge of the Alps: R is often only sighted; missing in Padania. (0-1400 m). Sub-cosmopolitan.

2n=16

Yellow: flower

PAL – 10852

Centaurium erythraea Rafn

Gentianaceae

Meadows and uncultivated. In whole territory: CC (0-1000 m). Mediterranean.

2n=(20) 40 (42)

Yellow: flower

PAL – 69489

Cercis siliquastrum L.

Fabaceae

Thermophilic broadleaf woods. Especially in the area of *Quercus pubescens* (preferably calcareous); also, widely cultivated as an ornamental and wild plant. In the whole territory (except Sardinia), but certainly spontaneous only in central Italy: C. (0-800 m). S-European-W-Asian (Pontic).

2n=14

Yellow: branches

PAL – 69557

Chelidonium majus L.

Papaveraceae

Walls, ruins. In the whole territory: C. (0-1200, rarely 1600 m). Eurasian became Circumboreal.

2n=12

Yellow: roots, sap

Blue: grass

PAL – 67480

Chenopodium vulvaria L.

Chenopodiaceae

Edges of streets, uncultivated. In the whole territory: R. (0-800, in Sicily up to 1850 m). European.

2n=18

Yellow: whole plant

PAL – 58437

Chondrilla juncea L.

Asteraceae

Uncultivated and dry meadows. In the whole territory: Northern Italy R; Southern Italy, central Italy, Sicily, and Sardinia: C. (missing on the alluvial soils of Padania (0-1700 m). Euri-Mediterranean-S-Siberian.

2n=15

Yellow: stem, flower

PAL – 11909

Chrozophora tinctoria (L.) A.Juss.

Euphorbiaceae

Stubble fields, abandoned or at rest, uncultivated. Liguria, Peninsula (north to Cesena, Faenza, Trasimeno, Orbetello), Sicily, Sardinia, and smaller islands: C in Sicily and neighboring islands, elsewhere: R. (0-700, rarely 1600 m). Mediterranean-Turanian.

2n=22

Blue: fruits juice, flowered bunches

PAL – 68955

Chrysojasminum fruticans (L.) Banfi

Oleaceae

Hedges. Cultivated and wild, especially in northern Italy in a hilly environment. (0-600 m). East Mediterranean.

2n=26

Yellow: young branches

NYBG – 3147100

Cichorium intybus L.

Asteraceae

Along the streets, in the uncultivated and ruins, also weed in the vegetable gardens. In the whole territory: C. (0-1450 m). Cosmopolitan.

2n=18

Green: grass

PAL – 70634

Citrus aurantium L.

Rutaceae

Cultivated. Especially in Sicily and Calabria and up to the Gargano (0-600 m). China-South.

2n=18

Red: peel of ripe fruit

Yellow: unripe fruits

NYBG – 1341913

Citrus medica L.

Rutaceae

Rarely grown.

2n=18 (20)

Yellow: unripe fruits
PAL – 106002

Clematis vitalba L.

Ranunculaceae

Sub-Mediterranean deciduous woods; hedges. In the whole territory, however in the South mostly on the reliefs and in the humid stations: C. (0-1300 m). European-Caucasian.

2n=16

Yellow: lianas

PAL – 70693

Clinopodium acinos (L.) Kuntze

Lamiaceae

Arid pastures (calcareous). Southern slopes of the Alps, Apennines up to Pollino, Sicily and Sardinia: R. (0-1300 m). Euri-Mediterranean.

2n=18

Green: stem, leaves

PAL – 87352

Clinopodium nepeta (L.) Kuntze

Lamiaceae

Arid meadows, the uncultivated, along the walls, but also the screes, the stony grounds, the herbaceous margins of the woods and the Meso-thermophilic shrubs. In whole territory: CC. (0-1400 m). Steno-Mediterranean.

2n=46

PAL – 72134

Clinopodium vulgare L.

Lamiaceae

Broadleaf woods. In the whole territory: C. (0-1500 m). Circumboreal.

2n=20

Yellow: leaves, flowery stem

PAL – 93721

Colchicum autumnale L.

Colchicaceae

Cropped meadows, damp environments, wooded hills. Alps, from the Giulie to the Marittime: C; Padania in the north of the Po, Appennins Ligure, Pavese and Tosco-Emiliano up to Abetone and Cerreto: R. (0-2100 m). Central European.

2n= 36, 38

Yellow: flower

PAL – 56221

Colutea arborescens L.

Fabaceae

Arid slopes, sub-Mediterranean undergrowth (preferably calcareous). In the whole territory (but with large gaps: it is missing in Padania and Venetian Pre-Alps in max part), in Sicily only as adventitia (Etna): R. Often confused with *Emerus majus*, but easily recognizable by the swollen legume etc. (0-1200 m). Euri-Mediterranean (Subpontic).

2n=16

Green: branches

PAL-GR – 51609_GR

Commelina communis L.

Commelinaceae

Uncultivated, woods. Padana Plain, Prealps, from Veneto to Piedmont: C; also in Lazio, Pescara, Cilento and in general around urban centers. (0-600 m). E-Asian.

2n= many are known, from 16 to about 90

Blue: flower

PAL – 79214

Consolida ajacis (L.) Schur

Ranunculaceae

Fields. Southern Piedmont, Liguria and the Peninsula (north to Lunigiana and Gargano), Sicily: C; probably native only in the western regions; in northern Italy, Marche, Umbria and Abruzzo escaped from cultivation and naturalization. (0-600 m). Euri-Mediterranean.

2n= 16, 18

Green: leaves, flowery stem

PAL – 69496

Convallaria majalis L.

Asparagaceae

Woods and woods. Alps, especially in deciduous forests, more rarely in pine and spruce forests: C; Padania, Northern Apennines, Lazio, Abruzzo, Campania: R; reported anciently in Basilicata, but not found later. (0-1200 m). Circumboreal.

2n=38

Yellow: roots, leaves

PAL – 90932

Convolvulus arvensis L.

Convolvulaceae

Vegetable gardens, vineyards, uncultivated land. In the whole territory: CC. (0-1500 m). Paleo-temperate became Cosmopolitan.

2n=50

Brown: stem, leaves, flower

PAL – 54911

Convolvulus sepium L.

Convolvulaceae

Wet woods, embankments, reeds, wet meadows, hedges, uncultivated. In the whole territory: C in northern and central Italy; progressively rarefied in southern Italy and the islands. (0-1400 m).

Paleo-tempered.

2n= 22, 24

Red: roots

PAL – 55072

Coriaria myrtifolia L.

Coriariaceae

Arid slopes, shores, cliffs (calcareous). Western Liguria: C; Parmigiano Apennines in the Manubiola valley and along the Taro to Oppiana. An isolated station on the Euganei. Friuli adventitia. (0-900 m). W-Mediterranean.

2n= 72, 80

Black: whole plant

PAL-GR – 102170_GR

Cornus mas L.

Cornaceae

Sub-Mediterranean broad-leaved woods. Northern Italy (missing in the Pad.), Peninsula up to the Pollino: R. (0-1400 m). SE-European-Pontic.

2n= 18, 27

Yellow: roots' bark

PAL – 85349

Cornus sanguinea L.

Cornaceae

Broad-leaved woods (oaks, chestnut trees), hedges. In the whole territory: C. (0-1300 m). Eurasian-Temperate.

2n=22

Yellow: branches

Green: bark

Purple: berries

PAL – 80568

Coronilla valentina subsp. *glauca* (L.) Batt.

Fabaceae

Limestone cliffs, garrigues. Liguria, Peninsula, Sicily and Sardinia: R. (0-1500 m). SW-Mediterranean.

2n=12

Green: stem, leaves

PAL – 3789

Corylus avellana L.

Betulaceae

In the undergrowth of deciduous and coniferous forests, woodland margins. In all the territory frequently cultivated. (0-1700 m). European-Caucasian.

2n= 22, 28

Green: bark, branches

PAL – 65156

Cota tinctoria (L.) J. Gay subsp. *tinctoria*

Asteraceae

Marly arid slopes (preferably calcareous). Liguria, central and southern Italy up to Campania: C; to the north of the Po in some areas (Colli Eug., Prealpi Lombarde): C; elsewhere (Southern Piedmont, Trentino): R; in alpine valleys, generally as an ephemeral adventitia. (0-1500 m). Central European-Pontic.

2n=18

Yellow: grass, flower

PAL – 29062

Cotinus coggygria Scop.

Anacardiaceae

Bushes and cliffs (calcareous). Northern Italy from the Carso Triestino to Lombardy and Canton Ticino: C. southern Piedmont (up to the Val di Susa), the Apennines in Liguria, Emilia-Romagna, Marche and Umbria, Spoleto, Narni, Sabina, M. della Tolfa, M. Gennaro and to the Agro Pontino:

R. to the south goes as far as the L'Aquila area, Gole di Popoli, Marsica, sporadic in Tuscany in Versilia, towards Florence and Siena. (0-900 m). S-European-Turanian.

2n=30

Red: roots' bark

Yellow: branches, leaves, bark

PAL-GR – 51851_GR

Crataegus monogyna Jacq.

Rosaceae

Bushes, hedges, sub-Mediterranean woods (mixed oak wood, ostereti) above all on the margins and in the clear sky (preferably calcareous). In the whole territory: C. (0-1500 m). Paleo-tempered.

2n=34 (51)

Red: wood

PAL – 85735

Crocus biflorus Mill.

Iridaceae

Dry pastures, meadows. Southern edge of the Alps from Veronese to Bergamasco, Piedmont, Liguria, Peninsula, and Sicily: R. (0-1200 m). Endemic.

2n=8

Yellow: stigmas

PAL – 85932

Crocus imperati Ten.

Iridaceae

Mountain meadows and grassy places near the sea. Southern parts of the Peninsula: Capri, Sorrento Peninsula, Taburno, Avellinese, Potenza: R; also reported in Umbria (Spoleto), Lazio in Sperlonga and Pollino, but to be confirmed. (0-1400 m). Apennine Endemic.

2n=26

Yellow: stigmas

PAL – 86221

Crocus longiflorus Raf.

Iridaceae

Dry and stony pastures, coppices. Sicily, Egadi and Malta: C; Southern Italy: R in the Salerno area (M. della Stella, M. Sacro), Murge, Basilicata in Serraneta, Pollino, Sila, Rosarno, Mongiana, Serra S. Bruno. (0-1500 m). Subendemic.

2n=28

Yellow: stigmas

PAL – 63952

Crocus sativus L.

Iridaceae

Cultivated as a condiment in Abruzzo in the Navelli plain and Sardinia in S. Gavino Monreale.

Rarely subspace (Bolzano, Marche, Umbria, Abruzzo, Sicily), but today almost disappeared. W-Asian.

2n= 20, 22, 24, 28

Yellow: stigmas

PAL – 63967

Crocus thomasii Ten.

Iridaceae

Arid stony pastures. Puglia from the Bari to Porto Cesareo and Otranto: C, also in Basilicata near Matera, Montocchio, M.Foj, Potenza to the Dragonare, Poggi di S. Michele and the Pollino: R. Reported by mistake in the Salernitano and on the Serra S. Bruno. (0-1000 m). Subendemic.

2n=16

Yellow: stigmas

VHLVB - 10 0355308

Crocus vernus (L.) Hill

Iridaceae

Generally fertilized meadows, alpine pastures. Alps from the Giulie to the Marittime: C; the reports for the northern and central Apennines, Puglia and Calabria are certainly erroneous. (600-2400 m). SE-European orophyte.

2n=8

Red: flower

Yellow: stigmas

PAL – 86415

Crucianella latifolia L.

Rubiaceae

Arid and stony slopes. Liguria, western coasts from the Argentario to the Circeo, southern Italy, Sicily (Catania, Avola), Sardinia and many smaller Islands: R; also near Florence and Tivoli, Abruzzo. (0-500 m). Steno-Mediterranean.

2n=44

Red: roots

PAL – 59241

Cruciata laevipes Opiz

Rubiaceae

Uncultivated, edges of streets, meadows, forest edges with rich soils. In all the territory, generally C, but R in Sicily (0-1500 m). Eurasian.

2n=22

Red: roots

PAL-GR – 53532_GR

Cupressus sempervirens L.

Cupressaceae

Cultivated for ornamentation and reforestation. Native to the Aegean, widespread throughout the territory, but especially in Liguria, the Peninsula, Sicily, Sadregna and smaller islands: C. (0-800 m). E-Mediterranean (Euri-).

2n=22

Yellow: branches

PAL – 69909

Curcuma longa L.

Zingiberaceae

Rhizomatous, herbaceous plant native to South-East Asia (India).

2n=63

Orange-red: rhizome

NYBG - 1505666

Cuscuta epithymum (L.) L.

Convolvulaceae

On numerous herbaceous and woody plants. In the whole territory: C. (0-1500, max 2000 m).

Temperate Eurasian.

2n= 14(16, 28, 30, 32)

Red: whole plant

PAL – 55653

Cuscuta europaea L.

Convolvulaceae

On nettle, hop, elder and other plants of the uncultivated. In the whole territory: C. (0-800, rarely 1800 m). Paleo-tempered.

2n=14

Red: whole plant, sap

PAL – 55617

Cyclamen hederifolium Aiton subsp. *hederifolium*

Myrsinaceae

Holm oak and deciduous woods (oaks, chestnut groves). Liguria, the Peninsula (north to the Via Emilia), Sicily, Sardinia, and smaller islands: C; Veneto, Trentino, Brescia to La Maddalena (RR and not recently observed), Turin to Revigliasco (adventitia?). (0-1300 m). N-Mediterranean (Steno-).

2n=34

Red: tuber

PAL – 63067

Cyclamen purpurascens Mill. subsp. *purpurascens*

Myrsinaceae

Woods, especially beech woods. Alps on southern chains from Gorizia to Valsesia: C; Trieste Karst, pre-Alpine reliefs, high Pianura Padana, Colli Euganei, western Alps from Ivrea to Liguria and Bologna to Barbiano: R. (0-1900 m). NE-Mediterranean orophyte.

2n=34

Red: tuber

PAL-GR – 54530_GR

Cyclamen repandum Sm.

Myrsinaceae

Shady holm oak woods and bush scrub although rarely found in deciduous woods. Peninsula, Sicily Sardinia: C. (0-1200 m). N-Mediterranean.

2n=ignote

PAL – 63071

Cydonia oblonga Mill.

Rosaceae

Cultivated for its fruit throughout the Mediterranean and sub-Mediterranean area; sub-spontaneous in the Peninsula and in the Islands. (0-1500 m). SW-Asian.

2n=34

Yellow: leaves

PAL – 71255

Cynara cardunculus L.

Asteraceae

Cultivated and spontaneous in arid meadows, fallows, and edges of the roads. Present in all Regions south of the Po river: C. (0-1100 m) Steno-Mediterranean.

2n=34

Green: leaves

PAL – 69058

Cynara scolymus L.

Asteraceae

Alien in Friuli, central and southern Italy: C. (0-1100 m) Steno-Mediterranean.

2n=34

Yellow: leaves

Grey: bracts

VHLVB - 14966-010

Cynomorium coccineum L.

Cynomoriceae

Parasite plant, brackish coastal areas. Sicily, Sardinia, Basilicata: C. (0-50 m.) Steno-Mediterranean.

2n=28

Red: whole plant

PAL-GR – 61146_GR

Cytisus hirsutus L.

Fabaceae

Meadows, heaths, thickets and coppices (preferably acidophilous). Alpine foothills and hills throughout northern Italy and Tuscany: C; present along the Apennine ridge with subsp. *polytrichus*. (0-1500 m). Central European.

2n=50

Green: leaves, branches

PAL – 91809

Daphne gnidium L.

Thymelaeaceae

Evergreen stain. Western coasts from Liguria to Calabria, Ionian coasts of Basilicata, Puglia, up to the Gargano, Sicily, Sardinia, and smaller islands: C; also, reported in Teramense in Tossicia. (0-800 m). Steno-Mediterranean-Macaronesian.

2n=18

Yellow: leaves, bark

Green: bark

PAL – 61284

Daphne laureola L.

Thymelaeaceae

Broad-leaved woods on mildly acid soils (oak, chestnut, more rarely beech or holm oak). In the whole territory: R. is missing from Padania and in large part of the evergreen Mediterranean belt. (300-800, in Abruzzo up to 1200, in Sicily up to 1500 m). Sub-Mediterranean-sub-Atlantic.

2n=18

Yellow: wood, leaves

PAL – 61304

Daphne mezereum L.

Thymelaeaceae

Beech woods, chestnut groves, mountain forests and subalpine moors. Alps: C; Northern and central Apennines (and also on the sub-Apennines), Campania, Pollino: R. (500-1800, rarely 100-2100 m). Eurosiberian.

2n=18

Green: stem

PAL – 61687

Daucus carota L.

Apiaceae

Uncultivated, anthropized environments and dry grassy sites. Throughout the national territory: CC. (0-1400 m). Sub-cosmopolitan.

2n=18

Red: sterile flower

Green: leaves, stem

PAL – 22061

Daucus carota subsp. *maximus* (Desf.) Ball

Apiaceae

Uncultivated. Peninsula (absent in the Marche), Sicily and Sardinia: R.

2n=18

Blue: pistils

PAL – 22073

Delphinium consolida L.

Ranunculaceae

Commensal in cereal crops (calcareous). In the whole territory excluding the Islands: C; but in recent years in many places it has become R. (0-1200 m). Euri-Mediterranean. (Archaeophyte?)

2n=16

Blue: corolla

PAL-GR – 100342_GR

Dioscorea communis (L.) Caddick & Wilkin

Dioscoreaceae

Dense woods, coppices, clearings, hedges. In the whole territory: C. (0-800, in Sicily up to 1400 m). Euri-Mediterranean.

2n=48

Yellow: berries

PAL – 76324

Diospyros lotus L.

Ebenaceae

Cultivated for wood and fruit and rarely run wild in northern and central Italy and up to Campania: R. (0-500 m). Asian.

2n=30

Yellow: branches, leaves

NYBG – 1018020

Diphasiastrum alpinum (L.) J. Holub

Lycopodiaceae

Pastures, blueberry heaths, dwarf shrubs, clearings on acid substrate. Alps from Giulie to Val di Susa: C; Cuneese in Val Pesio, Northern Apennines: R. (1000-2800 m). Circumboreal.

2n=46

Yellow: whole plant
VHLVB - 20 0002040

Diphasiastrum zeilleri (Rouy) J. Holub

Lycopodiaceae

Sparse deciduous woods, paths, moors, on siliceous substrate. At Scopello in Valsesia: RR. (650-1350 m). Circumboreal. (Euro-American).

2n=46

Yellow: whole plant

VHLVB - 20 0079395

Dipsacus fullonum L.

Dipsacaceae

Uncultivated, ruins, rubble, along the streets and ditches. In the whole territory, generally within the area of the vine: C; it is lacking in the high mountains and in Padania. (0-1400 m). Euri-Mediterranean.

2n=18

Grey: roots

PAL - 93697

Dittrichia viscosa (L.) Greuter subsp. *viscosa*

Asteraceae

Uncultivated fields, ruins, roadsides, edges of streams, preferably on a calcareous substrate. In the whole territory, generally within the area of the vine (0 - 800 m). Euri-Mediterranean

2n=18

Black: whole plant together with stems and leaves of *Rhus coriaria* and peel of *Punica granatum*

PAL - 8762

Echium vulgare L.

Boraginaceae

Uncultivated and dry pastures. In the whole territory: C. (0-1700 m). European.

2n=32

Green: leaves, stem

Grey: roots

PAL - 69766

Elaeagnus angustifolia L.

Elaeagnaceae

Cultivated by ornament especially in northern Italy, introduced on the beaches (Veneto and Friulano coasts, Marche, Lazio, and Abruzzo) to consolidate the dunes, which has become invasive. (0-600 m). Temperate Asian.

2n=28

Red: leaves, branches

S-LINN - 63.11

Erica arborea L.

Ericaceae

Thickets, coppices of holm oak, garrigues (silica or acidified soils). Liguria, Peninsula, Sicily, Sardinia, and smaller islands: C; Alps, from Garda to Lake Como and Eugeni Hills: R. (0-1200, in the North only 0-600 m). Steno-Mediterranean-Atlantic (S-African).

2n=12

Red: branches

PAL – 62860

Erodium moschatum (L.) L'Hér.

Geraniaceae

Uncultivated, vineyards, along the streets. Liguria, Piedmont, Peninsula, Sicily, Sardinia: C; also in Friuli, Veneto, Trentino, Emilia, Bresciano, but often only naturalized (0-1300 m). Euri-Mediterranean.

2n=20

Yellow: grass

PAL – 75102

Eryngium campestre L.

Apiaceae

Arid pastures (calcareous). In the whole territory: C. (0-1500 m). Euri-Mediterranean.

2n=14, 28

Yellow: leaves, stem, shoots, seeds

PAL – 19179

Erysimum cheiri (L.) Crantz

Brassicaceae

Old walls, castles, cliffs, limestone rocks. Naturalized in Liguria, the Peninsula, Sicily, Sardinia, and the smaller islands: C; also on the southern edge of the Alpine system from Trieste to Piedmont. (0-1000 m). Euri-Mediterranean.

2=12

Green: leaves, stem

PAL – 71194

Euonymus europaeus L.

Celastraceae

Broad-leaved woods (especially oak and chestnut woods), hedges. In the whole territory: C. (0-800, in Sicily 400-1300 m). Eurasian.

2n=64

Red: bark

Yellow: capsule

Black: (charred) branches

PAL – 65291

Eupatorium cannabinum L.

Asteraceae

On mud, wet soils, banks, ruins. In the whole territory: C. (0-1350 m). Paleo-tempered.

2n=20, 40

Red: flowery plant

PAL – 8264

Euphorbia characias L.

Euphorbiaceae

Environments of Mediterranean scrub and garrigue, on arid and sunny soils. Peninsula: C. (0-1000 m). Steno-Mediterranean.

2n=20

Yellow: whole plant

PAL – 87471

Euphorbia cyparissias L.

Euphorbiaceae

Arid, uncultivated meadows. Northern and central Italy on the reliefs: CC; Padana and other plains: R; Southwards to Abruzzo and Capua; an artifact in Sardinia at Ulassai. (0-1500, max 2500 m).

Central European.

2n=40

Green: whole plant

PAL-GR – 54451_GR

Euphorbia helioscopia L.

Euphorbiaceae

Uncultivated, dry pastures. In the whole territory: C. (0-1200, max 1800 m). Cosmopolitan.

2n=42

Green: whole plant

PAL – 52122

Euphorbia palustris L.

Euphorbiaceae

Shores of ditches, streams, swamps, especially along the major rivers. Padania: C (but mostly disappeared in the artificial channels); Peninsula (Lucchese, Pisa, Bientina, Maremma, Pontine Marshes, Piana del Sele and still near Pesaro, Pescara, Taranto, and Otranto): R. (0-400 m).

Eurosiberian.

2n=20

Yellow: whole plant

PAL – 53150

Euphorbia peplus L.

Euphorbiaceae

Nitrated fertilizers rich in nitrates: weed crops, vegetable gardens, ruins. In the whole territory: C. (0-1700 m). Eurosiberian become Cosmopolitan.

2n=16

Yellow: whole plant

PAL – 52907

Euphrasia officinalis L.

Orobanchaceae

Meadows and pastures. Alps: CC; Padania, Northern and Central Apennines: R; also, traced in southern Italy, but probably due to confusion. Circumboreal.

2n=22

Brown: grass, green capsule

PAL – 101818

Fagus sylvatica L.

Fagaceae

Mesophilic woods. The main component of the broad-leaved mountain forest, throughout the territory (excluding Sardinia), especially in the sub-Atlantic humid area. In the Alps, between 600-1300, in the Apennines between 1000 and 1700 m, in the Gargano at 600-800 m; missing in the Po Valley and in the Mediterranean belt (0-2000 m). European-Center.

2n=24

Yellow: fresh bark, branches, calyxes

PAL – 55755

Fallopia convolvulus (L.) Á.Löve

Polygonaceae

Weed crops, uncultivated. In the whole territory: C. (0-1200 m). Eurasian became Cosmopolitan.

2n=40

Yellow: dry plant

PAL – 68666

Ferula communis L.

Apiaceae

Ruins and edges of roads, generally on clay-limestone soils. Liguria, Peninsula, Sicily and Sardinia: C; sighted in Veneto and Lombardy (0-1000 m). S-Mediterranean (Euri-).

2n=22

Yellow: flower

PAL – 86053

Filipendula ulmaria (L.) Maxim.

Rosaceae

Dry, dry meadows (preferably calcareous). Alps, Padania, Peninsula (above all on the reliefs) up to Abruzzo: C; therefore, progressively rarefied in Campania, Puglia, and Basilicata (southwards up to the Barese and Pollino). (0-1500 m). Central-European-S-Siberian (steppic).

2n=14 (16)

Yellow: leaves, flowery stem

VHLVB – 1070599

Foeniculum vulgare Mill.

Apiaceae

Arid environments, cliffs, grassy sites and cultivated areas. In most of the national territory (olive and vine area): C. (0-1000 m). Euri-Mediterranean.

2n=22

Yellow: flowery stem

PAL – 94821

Fragaria vesca L.

Rosaceae

Hedges and wooded edges of beech, pine and fir trees, especially in bright areas. In the whole territory: C, but generally on the reliefs. (200-1900, rarely 0-2400 m). Eurosiberian become Cosmopolitan.

2n=14

Red: roots

Yellow: fruit

PAL – 23642

Frangula alnus Mill. subsp. *alnus*

Rhamnaceae

Broad-leaved woods, especially in damp environments. Northern Italy and the Tuscan Apennines, Marchigiana, Umbro, Abruzzese, Tyrrhenian coasts from Versilia to Agro Pontino and Eboli: R. (0-1300 m). Central European-Caucasian.

2n=22

Yellow: bark, berries, leaves

PAL-GR – 102209_GR

Fraxinus excelsior L.

Oleaceae

Riparii woods, wet gorges. Northern Italy: C; Central Italy: R; dubious in southern Italy. (0-1500 m). European-Caucasian.

2n=46

Yellow: fresh wood

Blue: bark

PAL – 100844

Fraxinus ornus L.

Oleaceae

Degraded scrubland in the sub-Mediterranean area. In the whole territory: C or R. (0-1400 m).

2n=46

Yellow: leaves

PAL – 57151

Fritillaria imperialis L.

Liliaceae

Cultivated by ornament and sub-spontaneous in gardens. W-Asian.

2n=24

Yellow: whole plant

S-LINN - 139.17

Fumaria officinalis L.

Papaveraceae

Cultured and pruned crops (especially potatoes), vegetable gardens, vineyards, ruins. In the whole territory: CC. (0-1600 m). Paleo-temperate, now Cosmopolitan.

2n=14, 28, 32, 48

Yellow: grass

PAL – 78085

Galeopsis ladanum L.

Lamiaceae

Stones, scraps, gravels, ruins, even weeds in cultivated areas. Northern Italy and the Peninsula (on the Tyrrhenian and Abruzzo sides) up to the Sila: R. (0-1000, max 2300 m). Eurasian.

2n=16

Red: flowery grass

PAL – 36752

Galeopsis tetrahit L.

Lamiaceae

Fields, rubble, debris (nitrophilic). Northern Italy, Central Italy, Campania: C; Basilicata in Muro and Pollino: R. (0-2000 m). Eurasian.

2n=32

Red: flowery grass

PAL – 36793

Galium aparine L.

Rubiaceae

Uncultivated, hedges, woods. In the whole territory: CC. (0-1700 m). Eurasian.

2n=22, 44

Red: roots

Red purple: roots

PAL – 59387

Galium boreale L.

Rubiaceae

Wet meadows and woods (preferably calcareous). Alps, from the Carniche to the Marittime: R; once also in the upper Po Valley, but almost everywhere disappeared. (600-1600, rarely 100-2200 m). Circumboreal.

2n=44

Red: roots

PAL – 90638

Galium mollugo L.

Rubiaceae

Thick meadows, damp woods. Alps, from Carnia to Liguria: R; also, reported in the Emilian Apennines and the central Apennines (0-1000 m). Euri-Mediterranean

2n=22

Red: roots

Yellow: stem, leaves

PAL – 87462

Galium sylvaticum L.

Rubiaceae

Mesophilous broadleaf woods, oak and hornbeam forest. Northern Italy: R; reported in the mountains of Tuscany and (less likely) than southern Italy. (0-1100 m). Central European.

2n=22

Red: roots

PAL – 59674

Galium verum L.

Rubiaceae

Dry meadows, woods. In the whole territory: C. (0-1700 m). Eurasian.

2n=22, 44

Red: roots

Yellow: flowery grass, spikes

PAL – 59738

Genista pilosa L.

Fabaceae

Acidophilous and subtermophilic, preferential and almost exclusive species of marly-arenaceous substrates. Southern edge of the Alps from the Trieste Karst to Piedmont, Liguria, the Apuan Alps, the Northern Apennines (eastward to the Sasso di Castro and Vallombrosa), southern Tuscany in the Siena and Argentario, Elba, central Apennines (Umbria, Lazio, and Abruzzo), southern Apennines in Basilicata, doubtful in Campania: R. Also, reported in the Pollino (perhaps confused with *G. sericea*). (100-1500 m) Central European (Sub-Atlantic).

2n=24, (40, 42) 44

Yellow: flowery branches

PAL – 89190

Genista tinctoria L.

Fabaceae

Sub-Mediterranean woods (oak, chestnut, pine) and mantle formations, heaths, dry meadows (preferably acidophilous). In the whole territory (excluding Sicily and Sardinia): C. (0-1800 m). Eurasian.

2n=48, 96

Yellow: stem, flowery branches

PAL – 91458

Geranium columbinum L.

Geraniaceae

Uncultivated, pastures, along the streets. In the whole territory: C. (0-1200). European-S-Siberian (sub-steppic).

2n=18

Yellow: grass

PAL – 74422

Geranium robertianum L.

Geraniaceae

Shady environments (walls, hedges, woods, caves). In the whole territory: C; in the Peninsula and Islands especially in the mountains. (0-1600 m). Sub-cosmopolitan.

2n=64

Yellow: grass

PAL – 68430

Glebionis coronaria (L.) N.N.Tzvel.

Asteraceae

Fields, vineyards, olive groves, uncultivated land. Liguria, Peninsula, Sicily and Sardinia and smaller islands: C; Umbria, Piedmont and Val d'Aosta, absent. (0-600 m). Steno-Mediterranean.

2n=18

Yellow: whole plant

PAL – 87466

Glebionis segetum (L.) Fourr. i

Asteraceae

Fields, vineyards, olive groves, uncultivated land. Liguria, Peninsula, Sicily and Sardinia and smaller islands: C; in northern Italy: RR, and only as an ephemeral adventitia (Trentino, Val d'Aosta). (0-800 m). Steno-Mediterranean-Turanian became Euri-Mediterranean.

2n=18

Yellow: whole plant

PAL – 87280

Gleditsia triacanthos L.

Fabaceae

Cultivated in hedges and gardens and sub-spontaneous in the inhabited areas. Northern Italy, Tuscany, Lazio, Marche, and Sicily: C. (0-500 m). N-American.

2n=28

Red: young branches, thorns

PAL – 91003

Gymnadenia nigra (L.) Rchb.f.

Orchidaceae

Range not well defined.

Purple: flower

PAL – 102682

Hedera helix L.

Araliaceae

Broad-leaved and shrub woods, also commonly cultivated for ornamentation. In the whole territory: CC; sometimes R. Especially in districts with an oceanic climate and in a Mediterranean environment. (0-1450 m). Submediterranean-sub-Atlantic.

2n=48

Black: leaves

Dark green: leaves and fruit

PAL – 62853

Helianthemum nummularium (L.) Mill. subsp. *nummularium*

Cistaceae

Dry meadows, sands, cliffs (calcareous). In the whole territory: C, but it is missing in Padania and in the other flood plains. (0-2500 m). European-Caucasian.

2n=20

Brown: roots, stem

PAL – 100850

Helianthus annuus L.

Asteraceae

Farm, roadsides, uncultivated, rubble. In the whole territory (excluding Val d'Aosta, Puglia, and Sardinia): random in most of the regions, naturalized in Friuli and Umbria. (0-1500 m). N-American.

2n=34

Yellow: flower

VHLVB - 10 0240564

Helichrysum italicum (Roth) G. Don

Asteraceae

Garrigues, bushes, dry meadows. It is common in the central, south Italy and in the islands; sporadic in the pre-Alpine area (0-800 -1.500). S-European

2n=28

Light Yellow: leaves, flowery stem

PAL – 93676

Helleborus foetidus L.

Ranunculaceae

Woodland edges, coppices. Alps from Veneto to Trentino (missing to the east of the Adige) to Liguria and northern and central Apennines as far as the Marche and Umbria: C; also in Sardinia. (0-1000, rarely 1800 m). Sub-Atlantic.

2n=32

Yellow: leaves, flowery stem

PAL-GR – 64021_GR

Hibiscus syriacus L.

Malvaceae

Grown for hedges in many varieties. In the whole territory, often sub-spontaneous: C. (0-600 m). E-Asian.

2n=88

Red: wood

Purple: flower
PAL – 108019

Hieracium umbellatum L.

Asteraceae

Woods (oaks, chestnut woods), moors, uncultivated, on generally acid soil. Prealpine Alps and hilly reliefs from Trieste to Liguria: C; also in Emilia Romagna, Tuscany, Umbria, Lazio, Basilicata and Campania: RR. (0-1500 [-1900] m). Circumboreal.

2n=18, 27

Yellow: grass

PAL – 32503

Hippophae rhamnoides L.

Elaeagnaceae

Riverbeds, landslides, gullies (often also introduced to stabilize the soil). Alps, Padania, Northern Apennines (especially on the N side) up to the valleys of the Foglia and Arno rivers: C; also in Umbria (M. Valmeronte) and Campania in Policastro. (50-1700 m). Eurasian temperate.

2n=24

Red: branches

H.PAOL - 3508

Humulus lupulus L.

Cannabaceae

Wet woods, hedges. In the whole territory; Northern Italy and the Apennines as far as Abruzzo: C; in the Mediterranean area in Sicily and Sardinia: R. (0-1200 m). European-Caucasian or Circumboreal.

2n=20

Red: leaves, flowery stem

PAL – 89011

Hypericum perforatum L.

Hypericaceae

Arid meadows, scrublands, edges of woods, along the streets, uncultivated. In the whole territory: C. (0-1600 m). Sub-cosmopolitan.

2n=32

Yellow: flower, flowery plant

Red: flower

PAL – 79061

Ilex aquifolium L.

Aquifoliaceae

Spontaneous in deciduous forests. Throughout the national territory, but intensely cultivated for wood and leaves and now rare in the spontaneous state: R; frequently cultivated in parks and gardens. (0-1400 m). Sub-Mediterranean-sub-Atlantic.

2n=40

Yellow: leaves, young branches

PAL – 65260

Impatiens balsamina L.

Balsaminaceae

Commonly cultivated and rarely sub-spontaneous. Northern Italy: R. (0-1000 m). SE-Asian.

2n=14, 18, 20, 24

Yellow: flower
VHLVB - 10 0132325

Indigofera tinctoria L.

Fabaceae
Cultivated.
2n=16
Blue: leaves
S-LINN - 314.3

Inula helenium L.

Asteraceae
Moor woods, coppices, ditches. Northern Italy (Piedmont, Veneto, Liguria, Emilia-Romagna; non-native in Friuli); Central and southern Italy (Umbria, Abruzzo, Molise, Campania, Puglia, and Basilicata; non-native in Marche and Lazio); dubious in Tuscany. (500-1200 m). SE-European orophyte.
2n=10
Blue: roots
PAL - 28199

Iris germanica L.

Iridaceae
Old walls, field margins, dry places, and cliffs. Cultivated for ornament and run wild throughout the territory; in the North: C; elsewhere, R is often referred to by mistake. (0-1200 m). Euro-Mediterranean. Unknown origin.
2n= (24, 34, 36), 44, (48, 60).
Green: flower
PAL - 64603

Iris pseudacorus L.

Iridaceae
Ditches, banks, marshes. In the whole territory: C. (0-300, max 1000 m).
2n=34 (24, 30, 32)
Yellow: roots
PAL - 64622

Isatis tinctoria L.

Brassicaceae
Uncultivated dry. In Italy, it has two distinct areas: Western Alps from the Val d'Aosta to the Maritime Alps, and Liguria: C; Peninsula (north to the Esino Valley at the Gola della Rossa, Visso, Norcia, Marsica, Capua), Sicily and Sardinia: C. Elsewhere: RR (near Bolzano, Langhe at Ceva, Pietra Parcellara, Coli, near Florence, Lazio at Tuscolo) or adventitious transient (Treviso) and absent on large tracts. (0-2100 m) SE-Asian (steppic).
2n=28
Blue: leaves
PAL - 100675

Jacobaea paludosa (L.) "G.Gaertn., B.Mey. & Scherb."

Asteraceae
Oligotrophic swamps. Alps and Po-Veneto plains: once widespread, today almost everywhere extinct: RR; recently reported in the Trieste area (0-600 m). Euro-Siberian.
2n=40

Yellow: flowery stem

PAL – 30145

Jacobaea vulgaris Gaertn.

Asteraceae

Arid meadows (calcareous). Northern Italy, Tuscany, Umbria, Campania, and Calabria: R; dubious in the Marche, Abruzzo, and Basilicata. (0-1500m). Paleo-tempered.

2n=20, 40

Green: leaves, flowery stem

VHLVB - 10 0495702

Jasminum officinale L.

Oleaceae

Hedges. Cultivated for ornamentation and feral in northern Italy, the Peninsula and Sicily. (0-800 m). SW-Asian.

2n=26

Yellow: young branches

PAL – 57425

Juglans regia L.

Juglandaceae

Cultivated for fruit and wood throughout the territory and frequently adventitia. (0-1200 m). SW-Asian.

2n=32

Yellow: bark, catkin, husk

Brown: roots' bark, leaves

H.PAOL - 1674

Knautia arvensis (L.) Coult.

Dipsacaceae

Arid, uncultivated pastures, woodlands. Alps from Carnia to Liguria, Tuscany (above all on the reliefs) up to Basilicata: C; in southern Italy in Campania, Puglia and Basilicata; dubious in Lazio, it is missing from the Marche to Abruzzo where it has often been indicated, but by mistake. (0-2000 m). Eurasian.

2n=20, 40

Yellow: leaves, dry flower

PAL – 65992

Laburnum anagyroides Medik.

Fabaceae

Broad-leaved woods (especially oaks and chestnuts), shrubs and woodlands. Northern Italy (only in the hilly area, missing in the high continental mountain valleys and in Padania): R; Central and southern Italy up to Pollino (doubt in Puglia): C; In Sicily, it is widely used for reforestations and sometimes sub-spontaneous. (0-800 m, rarely more). S-European.

2n=48 + 0-2B

Green: leaves

PAL – 84053

Lamium purpureum L.

Lamiaceae

Fields, vegetable gardens, vineyards, ruins. Northern and central Italy: C; Southern Italy and Sardinia: R. (0-1500, at Gr. S. Bernardo up to 2476 m). Eurasian.

2n=18

Green: flowery stem

PAL – 36705

Lathyrus aphaca L.

Fabaceae

Weed in wheat fields (calcareous), uncultivated. In the whole territory; in the Mediterranean area: C; on the findings: R; missing in the Padanian irrigated areas. (0-1500 m). Euri-Mediterranean.

2n=14

Green: fresh plant

PAL – 70675

Laurus nobilis L.

Mesophilic species on fresh arenaceous substrates, in the olive area. In the whole territory (0-800 m). Steno-Mediterranean.

2n=42

Greenish: fresh leaves

PAL – 87895

Lavandula angustifolia Mill.

Lamiaceae

Low spot and garrigue. Liguria (from where it goes back to Piedmont, in the Maritime Alps and Cozie), Coasts of Tuscany: R; commonly cultivated and sub-spontaneous throughout the territory. (0-1800 m). Steno-Mediterranean-West.

2n=54

Brown: stem, branches

VHLVB - 10 0355135

Lavandula angustifolia subsp. *pyrenaica* (DC.) Guinea

Lamiaceae

Low spot and garrigue. Liguria (from where it goes back to Piedmont, in the Maritime Alps and Cozie), Coasts of Tuscany: R; commonly cultivated and sub-spontaneous throughout the territory. (0-1800 m). Steno-Mediterranean-West.

2n=54

Brown: stem, branches

PAL – 36189

Leopoldia comosa (L.) Parl.

Asparagaceae

In whole territory: C. (0-1300 m). Euri-Mediterranean.

2n=18

Blue: flowers

PAL – 73387

Ligustrum vulgare L.

Oleaceae

Thermophilous deciduous woods, especially on the edges and in degradation shrubs, hedges. Alps, Padania, Peninsula up to Pollino: C; also in Sicily, but of indigenous doubt. (0-1300 m). European-Asian-W.

2n=46

Red: berries

Yellow: bark

PAL – 57326

Limonium virgatum (Willd.) Fourr. subsp. *virgatum*

Plumbaginaceae

On the coasts, both in brackish and rocky cliffs, also synanthropic. Adriatic coast from Monfalcone to Romagna, Lazio between Anzio and Gaeta, Abruzzo, southern Italy and Sicily, Sardinia, and many smaller islands: C; it is missing on the western coasts from Liguria to the Tiber, in the Marche and in Molise. (0-200 m, but always on the coast). Steno-Mediterranean.

2n=27

Blue: flower

PAL – 85060

Linaria vulgaris Mill. subsp. *vulgaris*

Plantaginaceae

Uncultivated, ruins, rubble, embankments. Northern Italy and Peninsulas: C; Sicily and Sardinia: RR. (0-1500 m). Eurasian.

2n=12

Yellow: stem, flower

PAL – 88671

Linum usitatissimum L.

Linaceae

Cultivated and sub-spontaneous. Throughout the territory, but in the process of disappearance. (0-2000 m).

2n= 30, 32

Black: soot

PAL – 90934

Liriodendron tulipifera L.

Magnoliaceae

Native to the eastern USA (from Florida to the state of New York), cultivated for ornamentation especially in Padania and Insubria. N-American.

2n=114

Yellow: young branches, leaves

S-LINN - 222.1

Lonicera alpigena L.

Caprifoliaceae

Cedui, clearings, humid scrub, especially in beech-woods and vegetation types by these dependents. Alps from the Giulie to Liguria: C (but preferably in the districts with an oceanic climate); Trieste Karst, Apuan Alps, Tuscan-Emilian Apennines, Central Apennines, Campania, and Basilicata, up to Pollino: R. (800-2100 m). Orophyte-S-European (sub-Illyrian).

2n= 18, 36

Yellow: young branches

H.PAOL - 2680

Lonicera caprifolium L.

Caprifoliaceae

Deciduous woods (oaks, chestnut trees), woods, hedges, vineyards. Northern and central Italy: C; Southern Italy up to the Pollino: R; missing in the major islands. (0-1200 m). SE-European (Pontic).

2n=18

Yellow: young stem

Lonicera periclymenum L.

Caprifoliaceae

Broad-leaved woods on acid soil. Piedmont (Val Sesia, Val Aosta), Bormiese, Western Liguria, Tuscany (M. Pisano, Maremma, Argentario, Amiata): R; also, reported in Veneto at Bassano, Marche, in Irpinia and near our borders in Canton Ticino and in Istria in Piran, but to be verified. (500-1400 m). W-European (Subatlantic).

2n=18, 36, 54

Yellow: young stem

PAL – 96199

Loranthus europaeus Jacq.

Loranthaceae

Woods. Hemi-parasite on deciduous oaks, more rarely also on cork oak and chestnut. Peninsula from Emilia to Calabria and Sicily: R; also on the Trieste Karst. (0-800 m). European-Caucasian.

2n=18

Red: wood

PAL – 66315

Lotus corniculatus L.

Fabaceae

Mostly in environments created by man (mowed and fertilized meadows, dry pastures, uncultivated grassy areas, also cultivated as fodder). In the whole territory: CC (in Sicily only rarely as a species introduced with fodder seeds). (0-1800 m). Paleo-temperate became Cosmopolitan.

2n=24

Blue: dry flowers

PAL – 96625

Lotus halophilus Boiss. & Spruner

Fabaceae

Wet sands at the coasts. Near Taranto, Policoro, Calabria, Sicily, Linosa: R. (0-300 m). S-Mediterranean.

2n=14

Blue: dry flowers

PAL – 96745

Lotus hirsutus (L.) Ser.

Fabaceae

Thicket, dry pastures. Liguria, Peninsula, Sicily and Sardinia: C; northern limit Ravenna - Bologna - Rubiera - Parma - Apennine ridge; also in western Trentino, Como. (0-1300). Euri-Mediterranean.

2n=14

Yellow: leaves

PAL – 3023

Lotus tenuis Waldst. & Kit.

Fabaceae

Wet meadows especially brackish. In the whole territory on the coasts, sporadically in Padania, Trentino and on the hills of Piedmont; in central-southern Italy and the Islands also inland and on the hills: R. (0-800 m). Paleo-tempered.

2n=12

Blue: dry flowers

PAL – 3401

Lycopodium clavatum L.

Lycopodiaceae

Pastures, blueberry moors, rocky places, woods. Alps: C. Northern Apennines: R. (500-2500 m). Circumboreal.

2n=68

Yellow: whole plant

PAL – 78160

Lycopsis arvensis L.

Boraginaceae

Fallows, fields, roadsides, and ruins. Northern Italy from Friuli (Pordenone plain) to Val d'Aosta, Piedmont and Liguria, Tuscany (Lunigiana, Volterrano, near Florence, but not recently found): R (and in regression); also in Abruzzo on the Piano di Laroma (Chieti) and in Sardinia in Gennargentu: RR. (0-1600 m). Eurasian.

2n=48

Yellow: fresh grass, flower

PAL – 100744

Lycopus europaeus L.

Lamiaceae

Wet meadows, ditches, reeds. (0-1100 m). Paleo-temperate became Circumboreal.

2n=22

Yellow: leaves, stem, flower

Black: grass, sap

PAL – 18107

Lysimachia vulgaris L.

Myrsinaceae

Marshes, ditches, wet woodlands. Northern and central Italy: C; still in the Salernitan area at Padula, near Potenza, on the Pollino and Sicily at Ispica. (0-1200 m). Eurasian.

2n= 28, 42, 84

Yellow: grass, stem, flower

Grey: roots

PAL – 102298

Lythrum salicaria L.

Lythraceae

Shores of ditches, streams, marshes even in a salty environment. In the whole territory: C. (0-1200, rarely 2100 m). Sub-cosmopolitan.

2n= (30), 60

Brown: flowery stem

PAL – 62317

Malus domestica Borkh.

Rosaceae

Commonly cultivated. In the whole territory: C. (0-1500 m).

2n=34, 51

Yellow: bark, leaves

Brown: dry wood

H.PAOL - 1908

Malva arborea (L.) Webb & Berthel.

Malvaceae

Spontaneous on the sea cliffs and wild. Sicily and Sardinia, in the Pontine Islands, Naples and perhaps elsewhere: RR; frequently cultivated and feral in Liguria, central Italy, Campania, Puglia: C; as a transient adventitress also in the N: Comasco in Mandello, Veneto in Rosolina. (0-600 m). Steno-Mediterranean.

2n=40

Yellow: stem, leaves

PAL – 66134

Marrubium vulgare L.

Lamiaceae

Uncultivated, ruins, dry pastures (nitrophilous). In the whole territory, Center-S and Islands: C; to the N especially in the hilly areas; it is almost missing in Padania (0-1200 m). Sub-cosmopolitan.

2n=34

Yellow: stem, flower

PAL – 14211

Matricaria chamomilla L.

Asteraceae

Uncultivated, or commensal in cereal crops. In the whole territory: C. (0-800 rarely 1500 m). Sub-cosmopolitan.

2n=18

Yellow: flower

PAL – 9259

Matthiola incana (L.) W.T.Aiton

Brassicaceae

Maritime cliffs (limestone) and old walls. On the entire west coast from Liguria to Calabria, Ionian and Adriatic coasts north to Conero, Sicily and Sardinia and in the smaller islands: C; elsewhere escaped from cultivation and naturalized (Trieste to Duino, Lake Garda, Lake Como), in the Peninsula also far from the sea, but then mostly introduced. (Coastal, naturalized up to 600 m). Steno-Mediterranean.

2n=14

Green: leaves, stem

PAL – 71361

Matthiola sinuata (L.) W.T.Aiton

Brassicaceae

Maritime dunes. Western coasts, Sicily, Sardinia, Elba, Giglio, Ischia, Pantelleria, Puglia in Otranto and Gallipoli: R. Mediterranean-Atlantic.

2n=14

Red: flower

PAL – 6548

Medicago sativa L.

Fabaceae

Cultivated for forage already in ancient times according to Pliny, then forgotten in the Middle Ages and reintroduced only by 3 centuries, now very common everywhere. Originally probably from Persia (the ancient empire of the Medes). In the whole territory: C. (0-1200, exceptionally 1900 m on the Stelvio). W-Eurasian.

2n=32

Yellow: dry grass

PAL – 75550

Melampyrum nemorosum L.

Orobanchaceae

Oak-hornbeam woods, and dependent associations. Reported in northern and central Italy, but mostly due to confusion, known with certainty only from Brescia to the Bergamasco: R; allied forms throughout the NE and the central Apennines from the Sibillini to Abruzzo, which probably represent a distinct taxon. (0-1000 m). Eurasiat.

2n=18

Green: flowery whole plant

PAL-GR – 54590_GR

Melampyrum pratense L.

Orobanchaceae

Woods on humified acid soil (oak, chestnut, beech, spruce). Alps, from the Giulie to the Marittime: C; also on the Trieste Karst, hills of Friuli and Treviso, Langhe and up to the margins of Padania; an ancient indication for the Bolognese (Gesso, Zola Predosa) should be verified. (100-1800 m). Euro-Siberian.

2n=18

Yellow: whole plant

PAL – 101802

Melia azedarach L.

Meliaceae

Grown in gardens and avenues, occasionally adventitious in neighboring areas. India.

Red: branches

PAL-GR – 102072_GR

Melissa officinalis L.

Lamiaceae

Uncultivated, ruins, often cultivated and wild. In the whole territory: until the nineteenth century, CC, now R and in many areas almost disappeared. (0-1000 m). W-Asian become Euro-Mediterranean.

2n=32

Green: leaves

PAL – 16087

Mentha aquatica L.

Lamiaceae

Embankments, banks, marshes. In the whole territory: C. (0-1200 m). Sub-cosmopolitan.

2n=96

Green: leaves, stem

PAL – 18109

Menyanthes trifoliata L.

Menyanthaceae

Marshes, ponds. Northern Italy (in the Padana Valley everywhere disappeared): R; Appennino Tosco-Emiliano, Valdarno, Umbria in Colfiorito, Paludi Pontine, Abruzzo, Matese and province of Avellino: RR. (0-2000, max 2170 m). Circumboreal.

2n=54

Yellow: grass

PAL – 93271

Mercurialis annua L.

Euphorbiaceae

Infesting the fertilized crops, vegetable gardens, abandoned soils, more rarely on walls and rubble.

In the whole territory: C. (0-1300, rarely even up to 1800 m). Paleo-tempered.

2n=16

Yellow: leaves, stem

PAL – 70499

Mercurialis corsica Coss. & Kralik

Euphorbiaceae

Sardinia: R. (0-1100 m). Endemic

2n=ignote

NL - 1353837

Mercurialis perennis L.

Euphorbiaceae

Mesophilous woods, especially beech woods. In the whole territory (excluding Sardinia); Alps, Northern Apennines: C; Peninsula and Islands: R; Padania: RR. (0-1600 m). European-Caucasian.

2n=48-112

Blue: grass

PAL – 85058

Mespilus germanica L.

Rosaceae

Rarely cultivated and wild in broad-leaved woods, on sub-acid soil (chestnut groves, oak forests). In the whole territory: R. (0-1000 m). S-European.

2n=34

Red: bark, wood, branches, fruit

PAL – 84873

Misopates orontium (L.) Raf. subsp. *orontium*

Plantaginaceae

Fields, vineyards, dry uncultivated (preferably silica). In the whole territory, Liguria, Peninsula, and Islands: C; Alps (only on arid slopes): R; Padania: mostly absent. (0-1000 m). Paleo-tempered.

2n=16

Yellow: fruited plant

PAL – 89281

Morus alba L.

Moraceae

Cultivated for the breeding of the silkworm in the whole territory and rarely sub-spontaneous. East Asia.

2n=14, 28

Yellow: wood

Green: leaves

VHLVB - 10 0235951

Morus nigra L.

Moraceae

Cultivated for the fruit throughout the territory and rarely sub-spontaneous. SW-Asia.

2n=28

Yellow: wood

VHLVB - 10 0399290

Muscari atlanticum Boiss. & Reut.

Asparagaceae

In whole territory: CC. (0-600 m). Mediterranean-Turanian

2n= 18, 28, 36, 45, 54, 72

Blue: flower

PAL – 63217

Muscari neglectum Ten.

Asparagaceae

In whole territory: CC. (0-600 m). Mediterranean-Turanian

2n=18, 28, 36, (45), 54

Blue: flower

PAL – 61571

Myricaria germanica (L.) Desv. subsp. *germanica*

Tamaricaceae

Riverbeds of mountain streams and floating up to the plain. Alps, Padania (along the rivers), northern and central Apennines up to Abruzzo: R. (0-2000 m). European-W-Asian orophyte.

2n=12

Black: fruit

PAL-GR – 54601_GR

Myrrhis odorata (L.) Scop.

Apiaceae

Mountain and subalpine meadows. Eastern Alps from the Giulie to the Grigne: C; also in the Langhe, Cozie and Maritime Alps (synanthropic), Appennino Tosco-Emiliano, Alpi Apuane: R. (1000-2100 m). SE-European orophyte.

2n=22

Yellow: leaves, green stem

PAL – 24309

Myrtus communis L.

Myrtaceae

Mediterranean maquis. Liguria, coasts of the Peninsula (on the Adriatic only up to the southern Marche), Sicily, Sardinia, and in almost all the smaller islands: C; as introduced plant and subsponthea still on the Costiera Triestina, Garda, Insubria lakes, Adriatic coasts up to Pesaro and at the mouth of the Po (0-500 m). Steno-Mediterranean.

2n=22

Brown: berries' juice, leaves

PAL – 62408

Narcissus pseudonarcissus L.

Amaryllidaceae

Cultivated for ornamentation (often in full-flowered forms) and feral in vegetable gardens, vineyards, fields. Spontaneous in southern Piedmont; naturalization in northern Italy, central and southern Italy up to Basilicata: R. (0-800 m). W-European.

2n= 14 (28, 42)

Yellow: flower

PAL – 85606

Nerium oleander L.

Apocynaceae

Riparian woods, river streams. Spontaneous in southern Italy, Sicily, and Sardinia; also in the Ligurian Riviera, Argentario and around Lake Garda, but probably only run wild; elsewhere commonly cultivated and often sub-spontaneous. (0-300 m.) S-Mediterranean.

2n=22

Yellow: branches, leaves

PAL – 63523

Nicotiana tabacum L.

Solanaceae

Cultivated on a large scale throughout the territory. (0-600 m.) N-American.

2n=(24) 48 (96)

Yellow: green leaves

Brown: yellowed leaves

PAL – 101690

Oenanthe pimpinelloides L.

Apiaceae

Marshes, springs, and rarely very moist deciduous forests. In most of the territory (with large gaps especially in the North): from R to C. (0-800- m). Mediterranean-Atlantic.

2n=22

Green: yellowed stem

PAL – 21127

Olea europaea L.

Oleaceae

Spontaneous and cultivated throughout the Mediterranean area. Liguria, Peninsula (up to the hills of Emilia-Romagna), Sicily, Sardinia and smaller islands: C; in the North only cultivated in the Trieste, Montebello, Bassano, Colli Eugeni, Garda, Lombard Prealps, especially on Lake Como, Canton Ticino, Langhe; in many of these areas the crop, after having experienced a phase of decline that lasted until the last decade of the last century, is currently in strong recovery, thanks also to the general increase in average temperatures. Recent installations have even been carried out on the Rhaetian side of the Valtellina. (0-900 m). Steno-Mediterranean.

2n=46

Yellow: young soft branches, leaves

PAL – 57307

Ononis natrix L.

Fabaceae

Dry meadows. Prealpine slopes from western Friuli (Sacile) to Piedmont and the Apennines up to Calabria: C. (0-1200, rarely 1700 m). Euri-Mediterranean.

2n=28, 32

Green: grass

PAL – 71437

Ononis spinosa L.

Fabaceae

Arid environments. In the whole territory, except in Sicily, with various subspecies: C. (0-1300 m). Euri-Mediterranean.

2n=30

Yellow: flowery stem

PAL – 92482

Opuntia ficus-indica (L.) Mill.

Cactaceae

Neophyte invasive. Peninsula, Sicily and Sardinia: CC. (0-1000 m). Neotropical.

2n=ignote

Origanum vulgare L.

Lamiaceae

Sparse bushes, bushes, sunny cliffs. In the whole territory: central and northern Italy: C (missing in Padania); Southern Italy up to the Murge and Pollino, Sicily and Sardinia: R. (0-1400, in Abruzzo up to 1700 m). Eurasian.

2n=30

Brown: top of the flowering plant

PAL – 17531

Paeonia officinalis L.

Paeoniaceae

Scree, woods, meadows. Alps and Apennines up to Abruzzo. (0-1800 m). European-Pontic.

2n=20

Grey: flower

PAL-GR – 100301_GR

Paliurus spina-christi Mill.

Rhamnaceae

Arid slopes, bushes. Northern Italy (excluding the plain), central and southern Italy up to Basilicata and Sicily (near Palermo, Madonie and Iblei); but in most of the Peninsula perhaps only as a wild species: C. (0-500 m). SE-European-Pontic.

2n=24

Yellow: young branches, leaves

PAL – 66031

Papaver rhoeas L.

Papaveraceae

Infesting the cereal fields, often even on ruins and rubble. In the whole territory: C. (0-1950 m). E-Mediterranean always synanthropic.

2n=14

Red: corolla

PAL – 83450

Papaver somniferum L.

Papaveraceae

Cultivated as a medicinal plant (opium poppy), for aromatic seeds (in the Alps) and as an ornamental species. Rarely subsponaneous. (0-1500 m). Euri-Mediterranean which has become Sub-cosmopolitan.

2n=22

Yellow: leaves, young soft stem

PAL – 84175

Parietaria judaica L.

Urticaceae

Roadsides, along dry stone walls and in arid places. Whole territory: CC. (0-1000 m). Euri-Mediterranean

2n=26

PAL – 93704

Parietaria officinalis L.

Urticaceae

Wooded eutrophic soils, rubble, abandoned lands, often nitrophilous and in shady environments. In the whole territory: C, but progressively rarefied in the South and sometimes absent in the Islands. (0-900 m). Central European-Asian-W.

2n=14

Green: leaves, fresh stem

PAL – 66259

Paris quadrifolia L.

Melanthiaceae

Wet deciduous and coniferous woods. Alps, northern and central Apennines: C; also in the Appennino Campano, Sila; in the Padania, almost everywhere extinct. (200-2000 m). Eurasian.

2n=20

Green: leaves

Brown: berries

PAL – 63398

Pelargonium inquinans (L.) L'Hér.

Geraniaceae

Commonly cultivated. S-African.

Red: corolla

VHLVB - 12460-010

Periploca graeca L.

Apocynaceae

Wet woods, hedges. Tuscany between Viareggio and Livorno and up to Cecina, Abruzzo, Otranto to the Almini, Calabria to the Bosco di Rosarno: R; in many places disappearing; cultivated and sub-spontaneous in Trieste. NE-Mediterranean (Steno-).

2n=24

Brown: whole plant

VHLVB - 10 1041013

Persicaria hydropiper (L.) Delarbre

Polygonaceae

Moist and muddy environments, ditches. The whole territory, excluding Puglia and Sardinia; Northern Italy: C; elsewhere: R. (0-1300 m). Cosmopolitan.

2n=20

Yellow: grass

VHLVB - 10 0463008

Persicaria lapathifolia (L.) S. F. Gray subsp. *lapathifolia*

Polygonaceae

Riverbeds and ditches, ruderal and cultivated environments. In the whole territory: CC. (0-1300 m). Cosmopolitan.

2n=22

Blue: leaves
PAL – 76179

Persicaria maculosa Gray subsp. *maculosa*

Polygonaceae

Weeds irrigated crops, ruderal. In the whole territory: CC. (0-1300 m). Cosmopolitan.

2n=22, 44

Yellow: grass

VHLVB - 10 0142723

Phaseolus coccineus L.

Fabaceae

Cultivated mainly for ornament: R. N-American.

Red: flower

VHLVB - 18 0006896

Philadelphus coronarius L.

Hydrangeaceae

Spontaneous in the sub-Mediterranean woods. Eastern Alps from Trevigiano to Bresciano, Tuscany and Abruzzo: R. (0-800 m). Subendemic.

2n=26

Red: branches

VHLVB - 10 0502901

Phillyrea angustifolia L.

Oleaceae

Drought and hard coastal soils. Peninsula, Sardinia: C; missing in Marche and Umbria. (0-500 m).

Steno-Mediterranean

2n=ignote

Yellow: branches, leaves

PAL – 92105

Phillyrea latifolia L.

Oleaceae

Stains and holm oaks. Liguria, Peninsula, Sicily and Sardinia and smaller islands: C; in the rest of northern Italy: RR. (0-800 m). Steno-Mediterranean.

2n=ignote

Yellow: branches, leaves

PAL – 57225

Phragmites australis (Cav.) Trin. ex Steud. subsp. *australis*

Poaceae

Marshes, banks, embankments, wet areas (even brackish). Throughout the territories: C. (0-1200, maximum 2000 m). Sub-cosmopolitan.

2n= (36) 48 (72, 84, 96)

Green: spikes

PAL – 67874

Physalis alkekengi L.

Solanaceae

Wet woods and hedges. Northern Italy: C; Central and southern Italy up to Cilento and Basilicata (Pomarico), Calabria, northern Sicily, Sardinia: R. (0-1000 m). Temperate Eurasian.

2n=24

Red: calyx, berries' juice

PAL – 80316

Physocarpus opulifolius (L.) Maxim.

Rosaceae

Cultivated in parks for ornamentation and observed sub-spontaneous in Piedmont and Lombardy. (0-500 m). N-American.

2n=18

Red: leafless stem

VHLVB - 10 0463624

Phytolacca americana L.

Phytolaccaceae

Vegetable gardens, uncultivated. Cultivated for the berries used to color the wine, it expands vigorously thanks to the roots: always near the inhabited areas. In the whole territory: C. (0-350). N-American.

2n=36

Red: berries' juice

PAL – 59117

Pistacia lentiscus L.

Anacardiaceae

It is one of the most common and representative shrubs of the Oleo-ceratonion, often in association with the olive and myrtle. Its presence in the Mediterranean maquis and garrigue is more sporadic. Quite frequent also in the bushy pastures and in the more degraded residual areas of the maquis. Peninsula, Sicily and Sardinia: CC. (0-600 m). Steno-Mediterranean.

2n=30

Red: leaves

PAL – 73415

Pistacia terebinthus L.

Anacardiaceae

On the slopes and in the cracks of limestone and arid cliffs, inside thermophilic woods. Peninsula, Sicily and Sardinia: C. (0-1000 m). Euri-Mediterranean.

2n=ignote

PAL – 68053

Picea abies (L.) H.Karst.

Pinaceae

The main component of the sub-alpine coniferous forest. Alps: CC; Northern and Tuscan Apennines: RR. (0-2200 m). Eurosiberian.

2n=24

Brown: top of the young branches

Black: soot

H.PAOL – 2209

Pinguicula vulgaris L.

Lentibulariaceae

Wet meadows, marshes, springs (generally acidophilous). Alps, from Carnia to Liguria, Appennino to Monti della Laga: R. (400-2350 m). Circumboreal.

2n=64

Red: leaves' juice
PAL-GR – 64193_GR

Pinus halepensis Mill.

Pinaceae

Arid slopes, spots and garrigues, especially coastal and on limestone. In the whole Peninsula, Sicily and Sardinia and smaller Islands: C; cultivated and sub-spontaneous on the Triestina and Garda coasts. (0-800 m). Steno-Mediterranean.

2n=24

Red: pulverized bark, cones

Yellow: leaves

PAL – 71800

Pinus pinea L.

Pinaceae

Dunes, scrub, dry slopes. Along the coasts of the Peninsula, Sicily, Sardinia and smaller Islands, northwards as far as Ravenna and Chioggia: C; less widespread inside, almost everywhere cultivated (indigenous doubt plant). (0-800 m). Euri-Mediterranean.

2n=24

Brown: bark

PAL – 21232

Pinus sylvestris L.

Pinaceae

Woods of the mountain belt. Arid centroalpine valleys from Tarvisio to Val Susa: C; also in the upper Lombard Plain, on the Asti side of the Collina di Torino, and on the northern Apennines from the Piacentino to the Modenese; grown in the rest of the Alps, Peninsula, and Sardinia. (100-1800 m). Eurasian orophyte.

2n=24

Red: wood

Yellow: young branches' bark

Black: soot

PAL-GR – 64921_GR

Plantago lanceolata L.

Plantaginaceae

Uncultivated, along the streets, fields, vineyards, generally synanthropic. In the whole territory: CC. (0-2000 m). Cosmopolitan.

2n=12, 24

Green: leaves

PAL – 78530

Platanus acerifolia (Aiton) Willd.

Platanaceae

Parks, along the streets. Cultivated and feral throughout the territory: CC in Padania and in the other irrigated plains. (0-800 m). Euri-Mediterranean.

2n=42

Red: wood

Yellow: branches' bark

PAL – 107890

Platycladus orientalis (L.) Franco

Cupressaceae

Native to northern China and Japan, cultivated for ornamentation and in the south for forestry purposes, run wild in Piedmont. (0-800 m). E-Asian.

2n=22

Yellow: branches with leaves

PAL – 21249

Plumbago europaea L.

Plumbaginaceae

Uncultivated, edges of streets, walls. Liguria, Peninsula, Sicily, Sardinia: R. (0-800 m). Steno-Mediterranean.

2n=12

Yellow: grass

PAL – 90467

Polygonum aviculare L.

Polygonaceae

Uncultivated and wet depressions. In the whole territory: Peninsula (on the reliefs) and along the coasts: CC; alpine valleys: R; not very common in Padania and in general in the alluvial plains where it is generally replaced by *P. arenastrum*. (0-850 m). Cosmopolitan.

2n=60

Yellow: whole plant

Blue: leaves

PAL – 69259

Polypodium vulgare L.

Polypodiaceae

Cliffs, walls, bark of trees. Alps, Northern Apennines: C; Friulano-Veneto and Padana plains: from RR to R; central and southern regions and islands: R is available at altitudes gradually, progressing towards the south; uncertain for Calabria and Sicily. (20-2850 m).

2n=148

Red: roots

PAL – 9455

Populus alba L.

Salicaceae

Damp or flooded stations along rivers and on lakes. In the whole territory: C. (0-1000 m). Paleo-tempered.

2n=38 (57)

Yellow: young branches

PAL – 64793

Populus nigra L.

Salicaceae

Spontaneous along rivers and lakes. In the whole territory: C; cultivated for ornament. (0-1200 m). Paleo-tempered.

2n=38, 57

Yellow: bark

PAL – 70770

Populus tremula L.

Salicaceae

Mountain woods, especially wet, more rarely up to the plains. In the whole territory: C. (0-2000 m)
Euro-Siberian.
2n= (19) 38 (57)
Yellow: bark
PAL – 83964

Potentilla anserina L.

Rosaceae

Trampled soils rich in soluble salts (on the subalophyte coasts, inside nitrophilous). Alps (from Carnia to Val d'Aosta, especially in valleys with a continental climate), Padania, Lazio, Avellino: C. (0-1800 m). Sub-cosmopolitan.

2n=28 (42)

Yellow: leaves

PAL – 23689

Potentilla erecta (L.) Raeusch.

Rosaceae

Meadows, heaths, and woods (acidophilous). In the whole territory: C. (0-2400 m). Eurasian.

2n=28

Red: roots

H.PAOL - 1850

Prunella vulgaris L.

Lamiaceae

Meadows, pastures, sepi, scrublands. In the whole territory: CC (0-2000 m). Circumboreal.

2n=28

Green: flowery plant

PAL – 15002

Prunus armeniaca L.

Rosaceae

Commonly cultivated. In the whole territory; shows no tendency to run wild. (0-1000 m). Central Asia.

2n=16

Yellow: young branches

PAL – 26405

Prunus avium (L.) L.

Rosaceae

Oaks and chestnut woods, often sub-spontaneous. Probably indigenous in broad-leaved woods on sub-acid soil: cultivated on a large scale throughout the territory (in Sicily only as a cultivated species) C. (0-1500 m). European-Caucasian.

2n=16

Yellow: dry wood

PAL-GR – 62403_GR

Prunus cerasus L.

Rosaceae

Often cultivated and wild. Throughout the territory, but probably only as an introduced plant. (0-800 m). Pontic.

2n=32

Red: fruit

PAL – 107891

Prunus domestica L.

Rosaceae

Commonly cultivated and sub-spontaneous (or spontaneous). In the whole territory. (0-1000 m).

Uncertain origin.

2n=48

Yellow: bark, wood, dry fruit

Brown: root

PAL – 26409

Prunus dulcis (Mill.) D.A. Webb

Rosaceae

Cultivated. In whole territory, except Calabria: C. (0-1000 m). S-Mediterranean

2n=ignote

H.PAOL - 1918

Prunus laurocerasus L.

Rosaceae

Cultivated for ornament. Across the territory, sub-spontaneous in areas with a Mediterranean climate; wild in Insubria, in the coastal pine forests in Tuscany, Castelli Romani and in Campania:

R. (0-300 m). W-Asian.

2n=144, 170-180

Red: branches, leaves

H.PAOL – 1915

Prunus mahaleb L.

Rosaceae

Sub-Mediterranean thermophilic bush (especially in the Quercetum pubescentis), coppices, hedges. Alps, Peninsula, Sicily: C to R. (0-800, in Sicily up to 1900 m). S-European-Pontic.

2n=16

Yellow: young soft branches

PAL – 84609

Prunus persica (L.) Stokes

Rosaceae

Cultivated on a large scale and grown in shrubbery and deciduous coppice. In the whole territory:

C. (0-600 m). East Asia.

2n=16

Red: young branches, kernel

PAL – 41869

Prunus spinosa L.

Rosaceae

Edges of the woods and paths, in sunny places. In whole territory: C. (0-1500 m). Eurasian.

2n=32, (40, 48)

Red: young branches

PAL – 26500

Pteridium aquilinum (L.) Kuhn subsp. *aquilinum*

Dennstaedtiaceae

Not thick woods, heaths, grassy slopes and terraces, uncultivated fields, on acid substrate also of calcareous origin. In the whole territory: from C to CC. (0-2100 m). Cosmopolitan.

2n=104

Grey: fresh roots

PAL – 69118

Punica granatum L.

Lythraceae

Cultivated for ornamentation or fruit and grown in the gardens. In the whole territory, within the area of the vine. (0-800 m). SW-Asian.

2n=16

Yellow: fruits' peel

Black: epicarp together with *Dittrichia viscosa* and *Rhus coriaria*

PAL – 62397

Pulsatilla montana (Hoppe) Rchb.

Ranunculaceae

Pre-Alpine valleys from Carnia to Piedmont, Friuli and northern Apennines: RR. (200-2400 m). SE-European.

2n=16

PAL-GR – 100168_GR

Pyracantha coccinea M. J. Roemer

Rosaceae

Evergreen woods, holm oaks, hedges. Frequently cultivated and naturalized, sometimes also included in natural vegetation; Peninsular Italy and Liguria, Sardinia: C; along the Adriatic it advances on ancient dunes consolidated up to Mesola and Rosolina; also in the urban area and alpine valleys. (0-900 m). W-Asian.

2n=34

Red: branches

PAL – 22955

Pyrus communis L.

Rosaceae

Broadly cultivated. In the whole territory, from the plains to the middle mountains. (0-1000 m).

2n=34 (51, 68)

Yellow: bark, wood

Brown: dry fruit

PAL – 6729

Quercus cerris L.

Fagaceae

Forests, especially on sub-acid soil with deep water stagnation. In the whole territory, excluding Sardinia and small islands; Padania: R is perhaps introduced, in the rest: C. (100-800, rarely 0-1500 m). N-Euri-Mediterranean.

2n=24

Brown: bark, young stem

Black: galls

PAL – 70468

Quercus coccifera L.

Fagaceae

Mediterranean scrub of the Oleo-Ceratonion type and in the garrigues linked to the degradation of the evergreen Mediterranean forest. Peninsula except Campania, Sardinia: RR; Sicily: C. (0-500 m). Steno-Mediterranean

2n=24

Black: galls

PAL – 55807

Quercus congesta C.Presl

Fagaceae

Mountain forest. Sicily, Sardinia, Calabria and Basilicata: C. (400-1400 m). NW-Mediterranean.

2n=24

Black: galls

PAL – 55878

Quercus ilex L.

Fagaceae

Soils not too humid, with good drainage. Whole territory, except Val d'Aosta: C. (0-1800 m).

Steno-Mediterranean

2n=24

Black: galls

PAL – 55841

Quercus ithaburensis subsp. *macrolepis* (Kotschy) Hedge & Yalt.

Fagaceae

At the edge of the fields; arid forests. Perhaps in ancient times introduced from the Greek coasts.

Peninsula Salentina, Matera: RR and to be protected. (0-200 m). East-Mediterranean.

2n=24

Brown: bark, branches, exudate

Black: galls, acorn' top

PAL-GR – 51858_GR

Quercus petraea (Matt.) Liebl.

Fagaceae

Acid or sub-acid soils, northern and central Italy, a distinct subspecies in southern Calabria and Sicily.

2n=24

Brown: bark, branches, exudate

Black: galls, acorn' top

PAL – 69120

Quercus pubescens Willd.

Fagaceae

Limestone slopes facing south. In whole territory: C. (100-1200 m). S-European.

2n=24

Black: galls

PAL – 56188

Quercus robur L.

Fagaceae

Fertile and deep soils in northern Italy and the Peninsula up to the Neapolitan. (0-800 m). European-Caucasian.

2n=24

Brown: bark, branches, exudate

Black: galls, acorn' top

PAL – 88948

Quercus suber L.

Fagaceae

Evergreen stains and woods (silica). C on the western coasts from Nizzano to Calabria, Sicily, Sardinia, elsewhere R (0-700 m). W-Mediterranean (Euri-).

2n=24

Black: charred bark

PAL – 56160

Quercus virgiliana (Ten.) Ten.

Fagaceae

In quite dry woods, on weakly acid soils, with optimum in the sub-Mediterranean zone. In the whole territory (200 -1200 m). SE-European

2n=24

Gray: bark

PAL – 70806

Ranunculus acris L.

Ranunculaceae

Meadows and uncultivated. Northern Italy: CC; Peninsula: R (especially on the reliefs); Sardinia (naturalized); missing in Sicily. (0-1600, maximum 2530 m). Sub-cosmopolitan.

2n=14

Yellow: flowery plant

PAL – 46208

Raphanus sativus L.

Brassicaceae

Plant of unknown origin, perhaps fixed hybrid, commonly cultivated and sub-spontaneous. In the whole territory: C. (0-1000 m).

2n=18 (36)

Purple: epidermis of the root

PAL – 5802

Reseda lutea L.

Resedaceae

In whole territory: C. (0-1600 m). Subcosmopolitan

2n=24, 48

PAL – 72617

Reseda luteola L.

Resedaceae

Riverbeds, stony, railways, walls. In the whole territory (excluding most of Padania): R. (0-1300 m). Circumboreal.

2n=24, 26, 28

Yellow: whole plant

PAL – 72641

Rhamnus alaternus L.

Rhamnaceae

Typical of holm oak and evergreen bush. Liguria, Peninsula, Sicily and Sardinia: C; to the north up to the Romagnolo Apennines, Bolognese, Reggiano, Garfagnana and Lunigiana; also in Trieste (indigenous doubt), Groppa a Semonzo; cultivated by ornament and naturalized on Lake Garda, Lake Como and Ivrea. (0-700 m). Steno-Mediterranean.

2n=24

Yellow: young branches, leaves

PAL – 84809

Rhamnus cathartica L.

Rhamnaceae

Thermophilic woods, bushes. Alps, Liguria, Peninsula (especially the eastern side) and Sicily (Madonie): C. (0-800, rarely 1400 m). S-European-Pontic.

2n=24

Red: overripe berries

Yellow: bark, green berries

Green: roots, ripe berries' juice

PAL-GR – 102182_GR

Rhamnus infectoria L.

Rhamnaceae

Prevalent on the Apennines, exclusive at least on the Auruncis, southern Apennines, and Sicily (Madonie, Nebrodi, Sicani).

2n=24

Yellow: green berries' peel

Green: ripe berries

H.PAOL – 4272

Rhus coriaria L.

Anacardiaceae

Uncultivated arid, often as a relic of ancient crops (plant rich in tannins). Liguria, Peninsula (missing in Umbria): R is disappearing; Sicily: C; naturalized also in the Trieste, Veronese, and province of Turin. (0-800 m). S-Mediterranean.

2n= ignote

Red: roots' bark

Yellow: bark

Brown: leaves

PAL – 73607

Rhus typhina L.

Anacardiaceae

Run wild in the uncultivated. Padania, southern slopes of the Alps, hills of Emilia, Cornero, Basilicata: R. (0-500 m). N-American.

2n=30

Yellow: bark

VHLVB - 10 0355409

Ribes rubrum L.

Grossulariaceae

Cultivated and spontaneous in cool places and in mountainous and valley bottom humid forests. Become spontaneous in the Alps, cultivated in the Apennines. (0-1500 m). W-European.

2n=16

Red: berries

Yellow: branches
VHLVB - 10 0340750

Ribes uva-crispa L.

Grossulariaceae

Mountain species of beech, fir, and larch woods, from where it sometimes descends into the lower parts of the valleys. Frequently cultivated. Alps and Apennines, up to Abruzzo: R; also in Sicily, on the slopes of Pizzo Carbonara (Madonie). (800-1500 m). Eurasian.

2n=16

Yellow: branches, leaves

PAL-GR – 50636_GR

Ricinus communis L.

Euphorbiaceae

Cultivated for oil and run wild. Veneto, Lazio, Campania, Calabria, Sicily, Sardinia: R; elsewhere sporadic and inconstant. (0-300 m). Paleotropical.

2n=20

Yellow: leaves, spike

PAL – 51694

Robinia hispida L.

Fabaceae

Adventitia in the Marche. E-N-American.

2n=30

Yellow: dry branches, bark

VHLVB - 13659-010

Robinia pseudoacacia L.

Fabaceae

Escarpmnts, uncultivated, hedges. Introduced in the seventeenth century and now completely spontaneous throughout the territory, in abandoned places, hedges, embankments, but always synanthropic. (0-1000 m). N-American.

2n=20, 22

Yellow: Dry wood, young branches

PAL – 72752

Rosa canina L.

Rosaceae

Woodlands, hedges, shrubberies. In all regions: C. (0-1500 m). Paleo-tempered.

2n=35

Yellow: roots, wood

PAL – 25238

Rosa pendulina L.

Rosaceae

Woodland edges, cliffs. Northern and central Italy, in all regions: C; also in Campania, it is lacking in the rest of southern Italy and the Islands. (600-1800 m). S-European orophyte.

2n=28

Yellow: young branches

PAL-GR – 54564_GR

Rosa rubiginosa L.

Rosaceae

Woodlands, shrubberies. Trieste Karst, Alps, from Trentino Alto Adige to the Maritime Alps: Widespread, also in Tuscany, Abruzzo, Campania, Calabria. (600-1400 m). Eurasian.

2n=35

Yellow: young branches

PAL – 26162

Rosmarinus officinalis L.

Lamiaceae

Stains and garrigues (calcareous). Liguria, Peninsula on the western and southern coasts (on the Adriatic only up to Molise), Sicily, Sardinia and in almost all the smaller Islands: C; also on the west bank of the Garda: RR; throughout the rest of the territory, commonly cultivated and often sub-spontaneous. (0-800 m). Steno-Mediterranean.

2n=24

Yellow: branches, leaves

PAL – 13993

Rubia peregrina L.

Rubiaceae

Evergreen woods (holm oaks) and more rarely deciduous trees, spots, hedges. Liguria, Sicily, Sardinia, smaller islands, Peninsula: C. (0-1000 m). Steno-Mediterranean-Macaronesian.

2n=66

Red: roots

PAL – 59797

Rubia tinctorum L.

Rubiaceae

Woodlands, hedges. Cultivated in the last century for the dyeing of fabrics, rarely naturalized in the sub-Mediterranean area (from the alpine valleys to the Islands), but in the process of disappearance: R. (0-1000 m). W and Central Asian.

2n=66

Red: roots

PAL – 59837

Rubus idaeus L.

Rosaceae

Moist mountain woodlands, on any substrate (200 - 2.000 m). In the whole territory, common in the Northern regions (0-1200 m). Circumboreal-Eurosiberian.

2n=14

Yellow: stem, fruits

PAL – 23155

Rubus odoratus L.

Rosaceae

Introduced as an ornamental plant and frequently run wild. (0-1800 m). N-American.

2n=14

Yellow: dry stem

PAL – 23176

Rumex acetosa L.

Polygonaceae

Mowed lawns, fertilized. In the whole territory: C. (0-2000 m). Sub-cosmopolitan.

2n=14, 15

Red: dry roots

Yellow: green roots

VHLVB - 10 0483410

Rumex acutus L.

Polygonaceae

Vegetation of high grasses on the edge of the humid woods, in the flooded riverbeds, near marshes, ditches etc. In the whole territory (missing in Val d'Aosta): C. (0-1300 m). Circumboreal-S-African.

2n=20

Yellow: roots

VHLVB - 07035 -010

Rumex alpinus L.

Polygonaceae

Around the huts, on meadows with fertilizers and manure. Alps from the Carnie to the Maritime: C; Apennines from Liguria to Pollino: widespread. (1600-2300 m, it rarely goes down to 800 m).

Euroamerican.

2n=20

Yellow: roots

PAL – 89768

Rumex aquaticus L.

Polygonaceae

Slow waters, swamps. Safe indications only for southern Tyrol and Tuscany: RR; to be eliminated from the Trieste Karst and to be verified in Molise and Lazio; elsewhere reported due to confusion. (0-900 m). Eurosiberian.

2n=140

Yellow: fresh roots

PAL – 89769

Rumex maritimus L.

Polygonaceae

Wet soils, sometimes sub-salts, sometimes confused with *R. palustris*. Veneto-Friulano coast, Sicily, Sardinia: RR. Eurasian. Observed in America.

2n=40

Yellow: roots

PAL – 90657

Rumex sanguineus L.

Polygonaceae

Wet deciduous woods, rarely also beech woods, oak woods, cork woods. In the whole territory (missing in Veneto, Trentino Alto Adige, and Emilia-Romagna): R. (0-1200 m). Circumboreal.

2n=20

Yellow: grass

PAL – 71235

Ruscus aculeatus L.

Asparagaceae

Holm oak, thermophilous deciduous forests. In the whole territory (however it is missing in part of Padania): C. (0-600, in the South 0-1200 m). Euri-Mediterranean.

2n=40

Yellow: stem, leaves
PAL – 61876

Ruta graveolens L.

Rutaceae

Grassy slopes and cliffs (calcareous). Northern Italy and the Peninsula (especially on the eastern side): C; but mostly cultivated and wild. (0-1100 m). Euri-Mediterranean.

2n=72

Green: leaves, stem

PAL-GR – 102164_GR

Salix alba L.

Salicaceae

Riveras stations and wet places. In the whole territory: C is frequently cultivated. (0-1200, sometimes 1600 m). Paleo-tempered.

2n=76

Red: debarked wood

Yellow: bark, branches

PAL – 65028

Salix alba subsp. *vitellina* (L.) Schübl. & Martens

Salicaceae

Cultivated and wild.

2n=76

Yellow: branches

PAL – 88316

Salix atrocinerea Brot.

Salicaceae

Freshly disturbed land, on beaches near the sea and on islands. Sandy or gravel shores of rivers, streams and ponds, meadows, valleys and hedgerows with some soil moisture. Sardinia and Tuscany: R. (0-1000 m). Euri-W-Mediterranean.

2n=74

Yellow: leaves

PAL – 102252

Salix caprea L.

Salicaceae

Edge of woods, escarpments, and wet areas. In the whole territory; Alps: C; Padania and the Apennines: R; Sicily and Corsica: RR; missing in Sardinia. (0-1800 m). Eurasian.

2n=38, 76

Red: debarked wood

Yellow: bark, branches, wood

PAL – 83447

Salix pentandra L.

Salicaceae

Marshes and peaty soils subject to temporary submersions. Alps, from Alto Adige to Piedmont; also, reported for the Tuscan-Emilian Apennines, Lazio and Molise: RR; Sardinia: R. (500-1900 m). Eurosiberian.

2n=76

Yellow: leaves

PAL-GR – 54571_GR

Salix purpurea L.

Salicaceae

Riverbeds and banks of water courses. In the whole territory including the Islands: C. (0-1800 m). Temperate Eurasian.

2n=38

Yellow: bark

PAL – 65114

Salvia officinalis L.

Lamiaceae

Arid cliffs and stony (calcareous). Trieste Karst, southern Lazio on the Ausoni, southern Italy, Sardinia (Monte di Oliena): R; also in Abruzzo (Fucino) and sub-spontaneous in northern and central Italy (0-300 m). E-Steno-Mediterranean.

2n=14

Yellow: stump, woody stem

PAL – 69437

Sambucus ebulus L.

Adoxaceae

Uncultivated, edges of fields and streets. In the whole territory: Liguria, Peninsula, and Islands: C; Alps and Padania: R. (0-1300 m). Euri-Mediterranean.

2n=32

Purple: ripe berries

PAL – 69440

Sambucus nigra L.

Adoxaceae

Wet woods, clearings, coppices, hedges. In the whole territory: C. (0-1400 m). European-Caucasian.

2n=36

Yellow: bark, branches, dry flowers

Purple: ripe berries

Brown: wood

Black: seed

PAL – 68508

Sambucus racemosa L.

Adoxaceae

Glade, woodland paths, especially in beech woods. Alps from Carnia to Liguria and northern Apennines: C; Umbria-Marche and Abruzzo Apennines at the source of the Melfa: RR. (900-2000 m). S-European orophyte.

2n=36

Yellow: young leafy branches

PAL – 96208

Sanguisorba officinalis L.

Rosaceae

Marshy meadows, low bogs. Alps and Padania (here almost disappeared following reclamation): C; Northern Apennines, central Italy, Pollino and Sila: R. (0-2000 m). Circumboreal.

2n=28, 56

Brown: whole plant
PAL – 24808

Saponaria officinalis L.

Caryophyllaceae

Uncultivated wet along the waterways. Largely naturalized in the gardens, along the streets, on the ruins and abandoned lands; throughout the territory: C. (0-1000 m). Eurosiberian.

2n=28

Red: pollen

PAL – 69441

Satureja hortensis L.

Lamiaceae

Uncultivated arid, walls (calcareous). Northern and central Italy, Sicily: R: probably only cultivated and sub-spontaneous. (0-1300 m). Euri-Mediterranean.

2n=24, 45, 48

Green: flowery stem

PAL – 16326

Scandix pecten-veneris L.

Apiaceae

Grassy environments and cereal fields. In the whole national territory: from R to C. (0-1200, rarely 1900 m). Sub-cosmopolitan.

2n=26

Yellow: grass, seeds

PAL – 90390

Scleranthus perennis L.

Caryophyllaceae

Arid stations. Northern and central Italy, Sicily: R. (600-1500, rarely 100-2100 m). Eurosiberian.

2n=22, 44

Yellow: roots

PAL – 83977

Scorzonera hispanica L.

Asteraceae

Rock slopes, steppe meadows. In the whole territory (excluding Lombardy, Calabria, and Islands): R. (300-1900 m). SE-European-S-Siberian.

2n=14

Grey: roots

PAL_GR – 64448_GR

Scrophularia nodosa L.

Scrophulariaceae

Wet woods, ravines, shores. Alps and Apennines up to Basilicata: C; Padania: R; also in Sardinia, Elba, and Ischia. (0-1800 m). Circumboreal.

2n=36

Yellow: stem, leaves

PAL – 43465

Selaginella denticulata (L.) Spring

Selaginellaceae

Grassy slopes, mossy terraces, sloping brook margins, cliffs, walls, from sunny to shaded stations. Coasts and Tyrrhenian and Ionian Islands: from CC to C; inland areas of central and southern regions, Adriatic coasts from the Marche to the south: from RR to R. (0-1500 m). Steno-Mediterranean-Macaronesian.

2n=18

Yellow: whole plant

PAL – 6062

Serratula tinctoria L.

Asteraceae

Woods, meadows, marshes. In the whole territory, not indicated in Puglia, Calabria and Sardinia. Northern Italy, the Tuscan-Emilian Apennines and the Marches: C; in the rest of the Peninsula and Sicily: R. (0-1600 m). Euro-Siberian.

2n=22

Yellow: stem, dry leaves, flower

PAL – 30850

Seseli libanotis (L.) W.D.J. Koch subsp. *libanotis*

Apiaceae

Pastures, dry meadows, and rocky environments (calcareous). Alps and central-southern Apennines (with lacunae): R. (500-2500 m). Pontic-Central European.

2n=22

Yellow: fresh plant

PAL – 25065

Silene vulgaris (Moench) Garcke S. subsp. *vulgaris*

Caryophyllaceae

In fields and meadows, especially if mown and fertilized, in lowlands and low mountains, often even ruderal-nitrophilous. In the whole territory (excluding the most arid areas): CC, but mostly synanthropic. (0-1500, rarely 2400 m). Sub-cosmopolitan.

2n=24

Green: leaves, flowery stem

PAL – 85323

Sisymbrium officinale (L.) Scop.

Brassicaceae

Ruins, rubble (synanthropic). In the whole territory: C. (0-1000 m, rarely up to 2400 m). Sub-cosmopolitan.

2n=14

Green: spikes

PAL – 5358

Sium latifolium L.

Apiaceae

Stagnant waters, banks, and marshes. Sporadic in Padania and Peninsula (in different locations disappeared or threatened by environmental alterations): R. (0-600 m). Central European.

2n=12, 20

Grey: leaves, flowery stem

PAL – 23835

Sixalix atropurpurea (L.) W.Greuter & Burdet

Caprifoliaceae

Liguria, Peninsula, Sicily and Sardinia: C. (0-1400 m). Steno-Mediterranean

2n=16

Green: whole plant

PAL – 93722

Smilax aspera L.

Smilacaceae

Spontaneous in the woods and in the maquis. Peninsula, Liguria, Sicily and Sardinia: C. (0-1200 m). Subtropical

2n=32

PAL – 82957

Solanum dulcamara L.

Solanaceae

Wet woods, uncultivated, generally in shady environments. In the whole territory: C. (0-1100, maximum 1450 m). Paleo-tempered.

2n=24 + 2B - 24

Grey: leaves, flowery stem

PAL – 80412

Solanum lycopersicum L.

Solanaceae

Cultivated on a large scale and often sub-spontaneous on rubble, shores, ruins, throughout the territory: C, but does not tend to become naturalized. (0-1500 m). Cultivated species.

2n=24, 48

Yellow: leaves, stem

PAL - 80383c

Solanum nigrum L.

Solanaceae

Uncultivated and ruins; edges of paths and roads. It is easily found in vegetable gardens, vineyards or cornfields. In whole territory: CC. (0-1000 m). Cosmopolitan

2n=12, 24, 36, 72

PAL – 80507

Solanum tuberosum L.

Solanaceae

Commonly cultivated and sub-spontaneous near crops. (0-1500 m). Cultivated species.

2n=24, 36, 48

Yellow: green leaves, flowery stem

PAL – 107198

Solidago canadensis L.

Asteraceae

Marshes, hygrophilous woods (especially poplar groves), uncultivated humid, banks, embankments. Reported in the North (naturalized in Friuli, Veneto, Lombardy, Piedmont, Liguria, Emilia-Romagna; invasive in Trentino and southern Tyrol): C; at the center of cases in Umbria, Marche, and Lazio. No longer found in Tuscany. (0-800 m). Circumboreal.

2n=18

Yellow: stem, leaves, flower

VHLVB - 10 0682460

Solidago virgaurea L.

Asteraceae

Woods, woods, pastures. In the whole territory, excluding Sicily: C (from Padania almost everywhere disappeared, it is generally missing in the area of the holm oak). Circumboreal.

2n=18

Yellow: leaves, flowery stem

PAL – 26896

Sonchus oleraceus L.

Asteraceae

Street edges, crops. In the whole territory: CC. (0-1700 m). Sub-cosmopolitan.

2n=18, 32, 36, 64

Yellow: leaves, flowery stem

PAL – 68545

Sorbus aucuparia L.

Rosaceae

Mountain woods (beech trees, fir trees) and subalpine woods, rhododendron bushes. Alps and Northern Apennines: C; other reliefs of the Peninsula, Sicily, and Sardinia: R. (600-2100 m, rarely up to the plain). European.

2n=34

Red: young branches

PAL – 22813

Sorbus domestica L.

Rosaceae

Sub-Mediterranean woods; also, cultivated for the fruit. In the whole territory, however, in northern Italy: R is often wild. (0-800 m). N-Euri-Mediterranean.

2n=34

Red: young branches

Brown: fruit

PAL – 22824

Sorghum bicolor (L.) Moench

Poaceae

Uncultivated, fields. Mainly cultivated in the Padania and in Tuscany, rarely subspace. (0-500 m).

Paleotropical.

2n=20

Purple: seeds

PAL – 93140

Spartium junceum L.

Fabaceae

Bushes in sunny stations. In the whole territory: C. (0-600 m, in the Apennines up to 1200-1400, on Etna up to 2000 m). Euri-Mediterranean.

2n=48

Yellow: young branches

Light green: young branches and flowers

PAL – 68530

Spinacia oleracea L.

Amaranthaceae

Anthropized and ruderal environments (cultivated, sometimes escapes). Veneto, Emilia-Romagna, Tuscany, Marche, Umbria, Abruzzo. (0-1500 m). W-Asian.

2n=12

Green: leaves

PAL – 58446

Stachys sylvatica L.

Lamiaceae

Broad-leaved woods on damp ground, their clearings, and glades. Northern and central Italy: C; Southern Italy and Sicily: R; in the Padania almost everywhere disappeared. (0-1700 m).

Eurosiberian.

2n=33

Yellow: grass

PAL – 37006

Staphylea pinnata L.

Staphyleaceae

Broad-leaved thermophilous woods, sunny cliffs. Trieste Karst, Alpine foothills from Friuli to Piedmont, northern slope of the Apennines in Parmigiano, Reggiano, Bolognese, Romagna and Marche, reliefs of Lazio and Campania: R; also in Tuscany, Basilicata, and western Calabria. (0-900 m). SE-European-Pontic.

2n=26

Yellow: leafy branches

PAL-GR – 102176_GR

Stellaria alsine Grimm

Caryophyllaceae

Springs, streams, swamps. Alps, Northern Apennines up to Romagna, Basilicata (Vulture, Muro) and Sila: R. (1000-2000 m, rarely less). Circumboreal.

2n=24, 26

Green: whole plant

PAL-GR – 101712_GR

Succisa pratensis Moench

Dipsacaceae

Wet meadows. Alps: C; in the rest of northern Italy, Tuscany, Lazio, Umbria, Agro Pontino, Abruzzo: R; also on the Sila and perhaps in Basilicata on the Pollino. (0-1600, max 2400 m).

2n=20

Yellow: roots

PAL – 89236

Sulla coronaria L. (Medik.)

Fabaceae

Clay soils also sub-salty. Liguria, the Peninsula (in the north as far as the Via Emilia), Sicily, Sardinia, and the nearby minor islands, but often cultivated and sub-spontaneous; missing from Padania, also cultivated on the Garda, Bergamasco and Novarese hills. (0-1200 m). W.-

Mediterranean.

2n=16

Brown: fresh flowers

PAL – 91697

Symphytum officinale L.

Boraginaceae

Wet meadows, riparian woods, often on the banks and along the ditches. Padania and alpine valleys: C; Peninsula in Versilia, Tuscan-Emilian Apennines, Umbria, Lazio, Campania, Basilicata, Sicily (Madonie, Mezzojuso): R. (0-1700 m). European-Caucasian.

2n=24

Black: grass

PAL – 63775

Syringa vulgaris L.

Oleaceae

Woodlands, hedges. Cultivated by ornament and often completely spontaneous in the Prealps from Friuli to Piedmont, Northern Apennines etc. (0-800 m). SE-European orophyte.

2n=46, 47, 48

Yellow: branches

VHLVB - 10 0682460

Tagetes erecta L.

Asteraceae

Man-made environments. Friuli, Veneto, Emilia-Romagna and Lazio. Mexico.

2n=24

Yellow: leaves, flowery stem, fresh flower

VHLVB - 10 0220806

Tamarix africana Poir.

Tamaricaceae

Coastal species, present both in large dune and retro-dune sandy areas and in coastal wetlands. Liguria, Peninsula, Sicily and Sardinia: C. (0-800 m). W-Mediterranean.

2n=12

PAL – 92266

Tamarix gallica L.

Tamaricaceae

Alluvial plains, lagoon systems, channels of waterways carved on predominantly carbonatic substrates, on the banks of rivers. Along the whole coast of the Peninsula and in the Islands, it has been confirmed for Veneto, Liguria, Emilia-Romagna, Tuscany, Lazio, Puglia, Basilicata, Sardinia, and Sicily: C, but located (0-800 m). Area to be specified.

2n=24

Yellow: green branches

PAL – 79176

Tanacetum vulgare L.

Asteraceae

Fallow, banks, roadsides, woods, clearings, pastures. Northern Italy, the Peninsula (along the Apennine ridge) up to Campania: C; Eastern Sicily. (0-3000 m). Eurasian.

2n=18

Yellow: leaves, flowery stem

PAL – 9323

Taxodium distichum (L.) Rich. var. *distichum*

Taxodiaceae

Native to North America, from the Carolina to Mexico (marshes and lake environments), cultivated in the gardens of the Po Valley and Tuscany on the edge of ponds and ponds. (0-300 m). N-American.

2n=22

Yellow: branches

VHLVB - 18 0013606

Taxus baccata L.

Taxaceae

Beech and other broad-leaved woods, preferably calcareous. Alps, Apennines, Sicily and Sardinia: R; commonly cultivated. (300-1900 m). Mediterranean-Mountain.

2n=24

Red: bulge on stem, fruit

PAL – 69018

Thalictrum aquilegiifolium L.

Ranunculaceae

Woods (especially beech woods). Alps and Peninsula (only on the reliefs) up to the Gargano and Sila: C; Padania: R. (50-2400 m). Eurosiberian.

2n=14

Green: leaves, stem

PAL-GR – 100210_GR

Thalictrum flavum L.

Ranunculaceae

Marshes, damp woods, peaty meadows. Area to be specified. (0-900 m). Eurasian.

2n=84

Yellow: roots, leaves, flower

PAL – 48180

Thalictrum minus L.

Ranunculaceae

Arid environments and edges of the woods (sub-Mediterranean oak woods), shrubs and clearings. In whole territory, except Puglia: CC. (0-2000 m). Eurasian

2n=42, 70

PAL – 48413

Thapsia asclepium L.

Apiaceae

Arid and rocky or rocky slopes. Central and southern Italy, Sicily, and Sardinia: R. (0-1200 m). Steno-Mediterranean.

2n=22

Yellow: umbels

PAL – 30040

Thapsia garganica L.

Apiaceae

Dry pastures. Tuscany, Latium and Southern Italy, Sicily, Sardinia (0-1400 m). S-Mediterranean

2n=22

Green: leaves

Yellow: Umbels

PAL – 21767

Thlaspi arvense L.

Brassicaceae

Cereal fields, vegetable gardens, ruins. Alps, Padania, Northern Apennines: C; Peninsula up to the Pollino: R. Absent in Puglia and the Islands. (50-2200 m). W-Asian. (Archaeophyte).

2n=14

Green: green plant, green seeds

PAL – 14457

Thuja occidentalis L.

Cupressaceae

Native to New England and Quebec, cultivated in gardens and sporadically wild (Merano). (0-800 m). N-American.

2n=22

Yellow: young branches

S-LINN - 389.15

Thymus vulgaris L.

Lamiaceae

Garrigues, dry slopes. Val d'Aosta, southern Piemonte, Liguria, Emilia-Romagna, Tuscany, Umbria, Lazio, Abruzzo: R; often cultivated and sub-spontaneous in Insubria, Marche, Puglia etc. (0-800 m). Steno-Mediterranean-Western.

2n=28, 30

Green: stem, leaves

PAL – 38112

Tilia × europaea L.

Malvaceae

Wet woods, ravines, often with elm, ash, alder, beech. Northern and central Italy, Campania, Basilicata, Calabria (Pollino, Serra San Bruno) and Sicily: R; grown in parks and avenues. (0-1200 m). European-Caucasian.

2n=82

Red: green bark

PAL – 66115

Trifolium pratense L.

Fabaceae

Meadows, pastures, uncultivated, also cultivated as forage. In the whole territory: CC. (0-2600 m). Sub-cosmopolitan.

2n=14

Yellow: grass

Green: flower

PAL – 1998

Trigonella foenum-graecum L.

Fabaceae

Uncultivated. Cultivated as fodder and rarely feral in Veneto, the Peninsula (in the north as far as the Via Emilia), Sicily and Sardinia. (0-800 m). SW-Asian.

2n=16

Yellow: grass

PAL – 595

Triticum aestivum L.

Poaceae

Cultivated everywhere over large areas in many cultivars: CC.

2n=42

Yellow: dry culms

PAL – 82530

Tropaeolum majus L.

Tropaeolaceae

Commonly cultivated for ornamentation and sometimes sub-spontaneous in gardens and in ruderal environments of the South. S-American.

2n=28

Yellow: flower

PAL – 92213

Ulex europaeus L.

Fabaceae

Bushes and sub-Mediterranean spots (silica). Apuan Alps and northern Tuscany: C; Peninsula on the western side from Liguria to Campania, Basilicata, and Calabria: R; penetrates eastwards into the Emilian Apennines up to San Marino, Pesaro and Fano. Reported again in Carnia (reforestation), the province of Bolzano (crops) and in the Como area. (0-1000 m). Sub-Atlantic.

2n=96 (32, 64)

Yellow: fresh flowers

PAL – 91640

Ulmus minor Mill.

Ulmaceae

Woods and uncultivated land. Along the bed of streams and streams. Whole territory: CC. (0-1200 m). European-Caucasic.

2n=28

Red: leaves

PAL – 69186

Umbilicus rupestris (Salisb.) Dandy

Crassulaceae

Shady walls or damp cracks in the rock. Peninsula, Sicily, Sardinia: CC; allochthonous in Lombardia, Veneto and Trentino Alto Adige. (0-1200 m). Steno-Mediterranean.

2n=48

PAL – 69192

Urtica dioica L.

Urticaceae

Abandoned lands, heaps of rubbish, nitrophilous, in the houses or even in the wood clearings. In the whole territory: CC. (0-1800, rarely 2300 m). Sub-cosmopolitan.

2n=52

Yellow: roots

PAL – 69327

Vaccinium myrtillus L.

Ericaceae

Woods, moors, bushes, pastures, always on humified acid soil. Alps: C; Northern and central Apennines up to Abruzzo: R. (1200-2000, rarely 300-2800 m). Circumboreal.

2n=24

Purple: berries

PAL – 97868

Vachellia farnesiana (L.) Wight & Arn.

Fabaceae

Cultivated for ornamentation in parks and gardens, and rarely for greening in southern Italy and Sicily.

2n=26, 52

Yellow: flower

PAL – 89112

Verbascum phlomoides L.

Scrophulariaceae

Uncultivated, hedges, ruins. In the whole territory: C in the Peninsula, in the rest R. (0-1300 m). S-European

2n=32, 34

Yellow: leaves, stem, flower

PAL – 44716

Verbascum thapsus L.

Scrophulariaceae

Uncultivated, hedges, ruins. In the whole territory: C. (0-2000 m). European-Caucasian

2n=(30,34) 36

PAL – 80327

Verbena officinalis L.

Verbenaceae

On the roadside, uncultivated trampled (synanthropic). In the whole territory: CC. (0-1200 m). Cosmopolitan.

2n=14

Yellow: flowery stem

PAL – 64982

Veronica chamaedrys L.

Plantaginaceae

Nitrate-rich environments in the woods, bushes, meadows along the paths. Settentrional Italy (especially in the Alps): C; Peninsula on the reliefs up to Calabria, progressively R. (0-2200 m). Euro-Siberian.

2n=16, 32, 36

Yellow: flowery plant

PAL – 89316

Veronica hederifolia L.

Plantaginaceae

Uncultivated, fields, gardens, roadsides, ruins, mountain forests. In the whole territory: C. (0-1800 m). Eurasian.

2n=54

Yellow: flowery plant

PAL – 43952

Veronica officinalis L.

Plantaginaceae

Woods, coppices, glades, moors, on acid soils. In the whole territory; Alps: C, in the rest R. (0-2000 m). Eurasian-Mountain. (-American).

2n=36 (34, 38)

Green: dry plant

PAL – 69042

Veronica serpyllifolia L.

Plantaginaceae

Sub-humid places, meadows, pastures, roadsides, and consortia of high grasses. In the Alps: C, in the rest of the territory: R. (0-2500 m). Sub-cosmopolitan.

2n=14

Yellow: flowery plant

PAL – 44029

Viburnum lantana L.

Adoxaceae

Thermophilous deciduous woods (especially *Quercetum pubescentis*). Alps and hill systems in front of the northern Apennines on the Emilian side: C; Padania, Alps Apuane, Apennine ridge up to Abruzzo: also in northern Campania and Avellino. (0-1000 m). S-European.

2n=18

Black: ripe berries

PAL – 102043

Viburnum opulus L.

Adoxaceae

Moorish woodlands, poplars, hedges. Alps, Padania, Emilian Apennines: R; also in northern Tuscany (near Pisa, Apennines Pistoiese, Apennines Romagnolo at Sasso di Simone), Umbria in Gubbio, Paludi Pontine, Abruzzo, and Basilicata (Pignola, Monte Arioso, Val d'Agri); still indicated for Campania and Salento Peninsula, but to be verified. (0-1100 m). Eurasian temperate.

2n=18

Red: green branches, ripe berries

H.PAOL – 2684

Viburnum tinus L.

Adoxaceae

Holm oaks, evergreen forests, hedges. Liguria, Peninsula (north to Cornero and Furlo, Perugia, Trasimeno, Siena, Lucca, Sarzana), Sicily, Sardinia, and smaller islands, also on the coast between Trieste and Duino: C; farther north (shores of Lake Garda, Insubria, Romagna, Florence etc.) cultivated and wild. (0-800 m). Steno-Mediterranean.

2n= ignote

Red: green branches

PAL – 59858

Vinca major L.

Apocynaceae

Woods, hedges, parks. In the whole territory (excluding Sardinia), but often wild. (0-800 m). Euro-Mediterranean.

2n=92

Yellow: stem, leaves

PAL – 63511

Vincetoxicum hirundinaria Medik. s.l. subsp. *hirundinaria*

Apocynaceae

Craggy sunny bushes, edges of woods, hedges. In the whole territory (missing in Sicily): C. (0-1000, rarely 1700-1900 m). Eurasian.

2n=22

Green: leaves, stem

PAL – 93446

Viola odorata L.

Violaceae

Woodland margins, hedges, grassy and wild places; often grown in gardens and run wild. In the whole territory: C. (0-1200 m). Euri-Mediterranean.

2n=20

Blue: flower

PAL – 73331

Viola tricolor L.

Violaceae

Fields, pastures. Distribution in Italy is not well known; Northern Italy: Widespread; Central and southern Italy up to Basilicata; Sardinia only in the mountains; missing in Sicily. (0-2100 m).

Eurasian.

2n=26

Yellow: grass

PAL – 90675

Viscum album L.

Santalaceae

Hemiparasite on various trees and shrubs. (0-1200 m). Eurasian.

2n=20

Yellow: branches, leaves

PAL – 80366

Vitex agnus-castus L.

Lamiaceae

River beds, streams, wet lowlands between the dunes. Liguria, Tuscan and Lazio coasts, Abruzzo at the mouth of the Sangro, southern Italy, Sicily, Sardinia, and smaller islands: R; in the rest of the territory often cultivated and sub-spontaneous. (0-500 m). Steno-Mediterranean-Turanian.

2n= ignore

Green: young branches

PAL – 65229

Vitis vinifera L.

Vitaceae

Cultivated in whole territory. (0-1000 m).

2n=38

PAL – 107828

Xanthium strumarium L.

Asteraceae

Ruins, rubble, dry uncultivated. In the whole territory, in many areas very rare and in regression, not reported in Val d'Aosta and Marche (considered as non-native in Basilicata; dubious in Umbria): R. (0-300 m). Cosmopolitan.

2n=(34) 36

Red: young branches

Yellow: grass, fruits, seeds

PAL – 8921