

Lichens of Gemlik, İznik, Mudanya and Orhangazi Districts in Bursa Province (Turkey)

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Abstract: : One hundred and eighty-one lichen taxa are reported from 88 localities in Gemlik, İznik, Mudanya and Orhangazi districts, north of Bursa, Turkey. Three species are new records for Turkey: *Arthonia dispersa* (Schrad.) Nyl., *Lecanora sambuci* (Pers.) Nyl. and *Opegrapha herbarum* Mont.. Sixty-two species are new records for Bursa province.

Key Words: Turkey, Bursa, Lichen, Biodiversity

Bursa İli (Türkiye) Gemlik, İznik, Mudanya ve Orhangazi İlçelerinin Likenleri

Özet: Bu çalışmada Gemlik, İznik, Mudanya ve Orhangazi ilçelerinde 88 istasyondan 181 liken taksonu rapor edilmiştir. 3 takson Türkiye için yeni kayıttır: *Arthonia dispersa* (Schrad.) Nyl., *Lecanora sambuci* (Pers.) Nyl. ve *Opegrapha herbarum* Mont.. 62 tür Bursa ili için yeni kayıttır.

Anahtar Sözcükler: Türkiye, Bursa, Liken, Biyoçeşitlilik

Introduction

In spite of the increased studies on lichen diversity of Turkey in recent years, still there are some regions that have not been sufficiently studied. There are several investigations from the study area. Özdemir & Öztürk (1992) recorded 36 lichen taxa from Gemlik and Mudanya districts. Öztürk (1997) recorded 26 lichen species from Armutlu and Gemlik. In İznik, previous lichen records are scarce. *Peltigera rufescens* was recorded by Szatala (1927), and *Candelariella vitellina*, *Toninia cinereovirens* and *T. tristis* were recorded by Schindler (1998). Studies with lichen records from Bursa province were published by Steiner (1916), Szatala (1927, 1940, 1960), Pisut (1970), Verseggy (1982), Öztürk (1990, 1992, 1997), Öztürk et al. (1997), Güvenç & Aslan (1994), Schindler (1998), Yazıcı (1999) and Güvenç (2004). The purpose of this study was to make contributions to the lichen diversity of Turkey.

Description of the study area

The study area is located between 39-40° N and 28-29° E in the north-west of Turkey, south Marmara Region. The districts of İznik and Orhangazi surround Lake İznik. Gemlik and Mudanya districts are located at the coast of Marmara Sea. A Mediterranean climate is dominant in the province (Akman, 1999). Total annual precipitation of the province was 731.1 mm, and the average daily maximum temperature was 30.9 °C in August, while the minimum temperature was 1.7 °C in January (DGİGM, 1974).

A large part of Gemlik and Mudanya is an urban area. Maquis, the natural plant cover of the study area, has been disturbed by human activity. Furthermore, *Pinus* sp. and *Quercus* sp. are present locally.

The vegetation is composed of maquis (*Erica arborea* L., *Juniperus oxycedrus* L., *Phillyrea latifolia* L., *Pistacia lentiscus* L., *Cistus* spp., as main shrubs), large

plantations of *Olea europea* L. and *Pinus brutia* Ten., *Pinus nigra* Arn. subsp. *pallasiana* (Lamb) Holmboe., *Platanus orientalis* L., *Quercus* spp., *Populus* sp. and *Salix* sp. as abundant trees in the study area.

Materials and Methods

The samples were collected from 88 stations of Gemlik, İznik, Mudanya and Orhangazi districts in 2000 and 2001 (Figure 1). The nomenclature follows a rather modern concept, e.g., Blanco et al. (2004a, 2004b) and Hawksworth (2004). Authors names are abbreviated according to Brummitt & Powell (1992). The specimens are stored in the herbarium of Uludağ University (BULU) in Bursa. New records for Turkey and new records for Bursa province are marked with an asterisk (*), and plus (+), respectively. A herbarium number for specimens (BULU) is indicated in parenthesis.

The localities are as follows:

1. **Gemlik:** Muratoba village, agricultural field, 60 m, 40°23' N-29°11' E, 20.5.2001.

2. **Gemlik:** on the road of Katırlı village, 400 m, 40°22' N-29°12' E, 20.5.2001.

3. **Gemlik:** between Hamidiye and Şükriye, rocky field, 350 m, 40°21' N-29°16' E, 20.5.2001.

4. **Gemlik:** around Fevziye village, oak woodland, 390 m, 40°21' N-29°17' E, 20.5.2001.

5. **Gemlik:** between Şükriye and Findıcak, 5 km from Şükriye, 650 m, 40°20' N-29°18' E, 20.5.2001.

6. **Gemlik:** between Umurbey and Adliye, entrance of Adliye, roadside, 220 m, 40°24' N-29°11' E, 20.5.2001.

7. **Gemlik:** between Adliye and Güvenli, 3 km from Adliye, 420 m, 40°23' N-29°13' E, 20.5.2001.

8. **Gemlik:** Şahintepe, 650 m, maquis field, 40°28' N-29°13' E, 3.6.2001.

9. **Gemlik:** between Büyükkumla and Haydariye, Ayvalık, 200-400 m, 40°29' N-29°06' E, 3.6.2001.

10. **Gemlik:** Karacaali, Şelale, 370 m, 40°29' N-29°04' E, 3.6.2001.

11. **Gemlik:** between Hayriye and Narlı, around Selimiye, rocky field, 400 m, 40°30' N-29°00' E, 3.6.2001.

12. **Gemlik:** between Narlı and Kapaklı, exit of Narlı, rocky field, 0-20 m, 40°28' N-29°00' E, 3.6.2001.

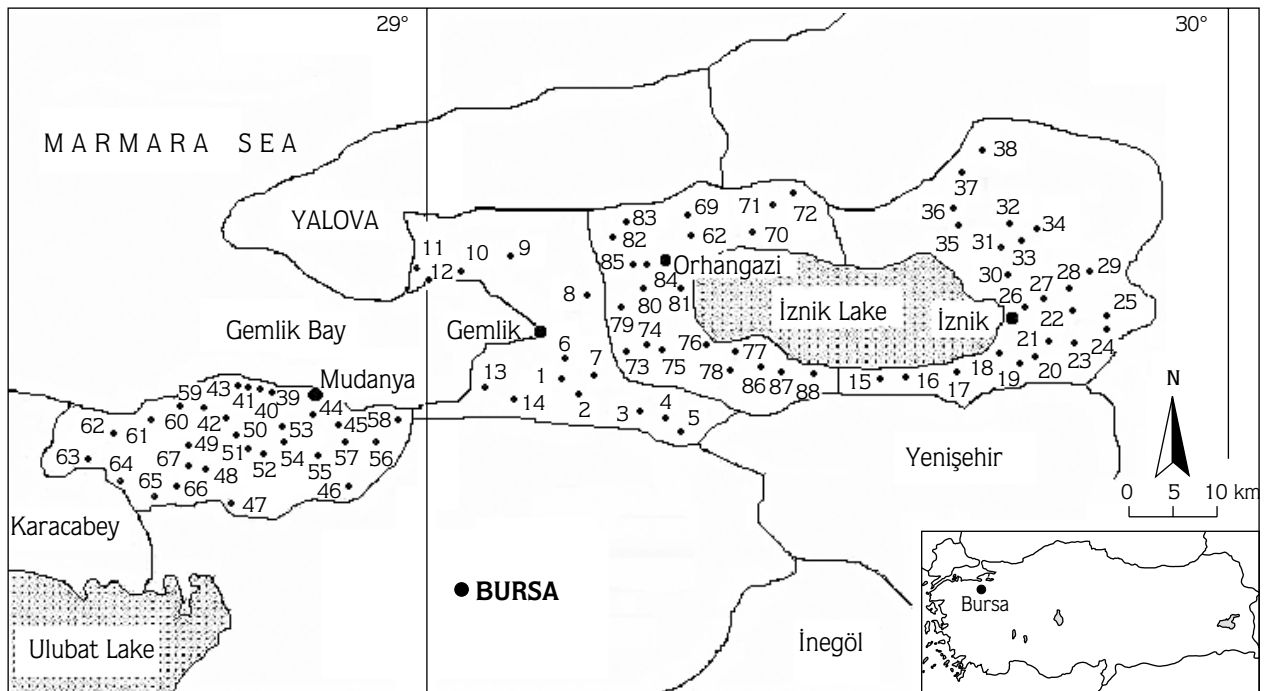


Figure 1. The study area: Localities indicated by numbers (1-88).

13. **Gemlik:** between Kurşunlu and Engürücük, around Gençali, roadside, 20 m, 40°22' N-29°05' E, 30.6.2001.
14. **Gemlik:** between Bursa and Gemlik, around Kurtul, roadside, 90 m, 40°22' N-29°07' E, 30.6.2001.
15. **İzник:** in the vicinity of Demirşık, rocky area, 80 m, 40°23' N-29°34' E, 2.9.2000.
16. **İzник:** Göllüce village, 100-250 m, 40°23' N-29°36' E, 2.9.2000.
17. **İzник:** in the vicinity of Aydınlar, agricultural field, 110-270 m, 40°23' N-29°39' E, 2.9.2000.
18. **İzник:** Drazali village, 80 m, 40°24' N-29°43' E, 20.9.2000.
19. **İzник:** on the road to Nushetiye village, oak woodland, 290 m, 40°23' N-29°45' E, 20.9.2000.
20. **İzник:** in the vicinity of Şerefiye, 120-300 m, 40°24' N-29°46' E, 20.9.2000.
21. **İzник:** Hocaköy, 120-170 m, 40°25' N-29°41' E, 20.9.2000.
22. **İzник:** Dereköy, 180 m, 40°26' N-29°49' E, 20.9.2000.
23. **İzник:** between Çiçekli and Çamoluk, 250 m, 40°24' N-29°48' E, 20.9.2000.
24. **İzник:** in the vicinity of Kaynarca, agricultural field, 250 m, 40°25' N-29°51' E, 20.9.2000.
25. **İzник:** in the vicinity of Alakaya, 280 m, 40°26' N-29°51' E, 20.9.2000.
26. **İzник:** between İzник and İhsaniye, 1 km from İzник, 110 m, 40°26' N-29°44' E, 15.10.2000.
27. **İzник:** between İzник and İhsaniye, 3 km from İzник, rocky field, 250 m, 40°27' N-29°46' E, 15.10.2000.
28. **İzник:** between İzник and İhsaniye, 7 km from İzник, 650 m, 40°28' N-29°49' E, 15.10.2000.
29. **İzник:** in the vicinity of Sansarak, oak woodland, 775 m, 40°28' N-29°50' E, 15.10.2000.
30. **İzник:** between İzник and Elbeyli, rocky field, 130 m, 40°28' N-29°44' E, 11.2.2001.
31. **İzник:** between Elbeyli and Ömerli, 300 m, 40°30' N-29°43' E, 11.2.2001.
32. **İzник:** between Ömerli and Tacir, 400 m, 40°31' N-29°44' E, 11.2.2001.
33. **İzник:** between İnikli and Gürmüzlü, *Pinus* sp. forest, 350 m, 40°31' N-29°45' E, 11.2.2001.
34. **İzник:** Gürmüzlü village, 560 m, 40°31' N - 29°46' E, 11.2.2001.
35. **İzник:** between Orhaniye and Sağırağıl, 3 km from Orhaniye, 280-360 m, 40°31' N-29°40' E, 11.3.2001.
36. **İzник:** in the vicinity of Sağırağıl, oak woodland, 460 m, 40°33' N-29°40' E, 11.3.2001.
37. **İzник:** in the vicinity of Süleymaniye, 500 m, 40°34' N-29°41' E, 11.3.2001.
38. **İzник:** in the vicinity of Mecidiye, 490 m, 40°35' N-29°42' E, 11.3.2001.
39. **Mudanya:** Kumyaka village, around church, 0 m, 40°23' N-28°51' E, 27.7.2000.
40. **Mudanya:** exit of Kumyaka, olive grove, 10 m, 40°23' N-28°51' E, 27.7.2000.
41. **Mudanya:** around Zeytinbağı, 40 m, 40°23' N-28°49' E, 27.7.2000.
42. **Mudanya:** between Mudanya and Mirzeoba, olive grove, 250 m, 40°22' N-28°47' E, 27.7.2000.
43. **Mudanya:** Zeytinbağı village, 10 m, 40°24' N-28°48' E, 27.7.2000.
44. **Mudanya:** entrance of Işıklı village, olive grove, 110 m, 40°21' N-28°52' E, 27.7.2000.
45. **Mudanya:** around Yörükali village, 80 m, 40°21' N-28°55' E, 27.07.2000.
46. **Mudanya:** around Bademli, Meşeliköy, oak woodland, 140 m, 40°17' N-28°55' E, 27.7.2000.
47. **Mudanya:** exit of Çekrice village, agricultural field, 80 m, 40°17' N-28°47' E, 22.3.2001.
48. **Mudanya:** between Orhaniye and Çınarlı, agricultural field, 100 m, 40°18' N-28°47' E, 22.3.2001.
49. **Mudanya:** around Yamanköy, oak woodland, 150-300 m, 40°20' N-28°44' E, 22.3.2001.
50. **Mudanya:** between Zeytinbağı and Mirzeoba, before 2 km from Mirzeoba, 340 m, 40°20' N-28°48' E, 22.3.2001.
51. **Mudanya:** around Dereköy village, agricultural field, 240 m, 40°20' N-28°48' E, 22.3.2001.
52. **Mudanya:** around İpekyayla village, agricultural field, 350 m, 40°20' N-28°50' E, 22.3.2001.

53. **Mudanya:** Çepni village, 410 m, 40°20' N-28°51' E, 22.3.2001.
54. **Mudanya:** between Çepni and Akköy, entrance of Akköy, 350 m, 40°19' N-28°51' E, 22.3.2001.
55. **Mudanya:** around Ülkü village, *Pinus* sp. forest, 290 m, 40°19' N-28°53' E, 22.3.2001.
56. **Mudanya:** around Göynüklü village, roadside, 200 m, 40°29' N-28°58' E, 30.6.2001.
57. **Mudanya:** between Mudanya and Aydınpınar, exit of Aydınpınar, 80 m, 40°19' N-28°56' E, 30.6.2001.
58. **Mudanya:** between Altıntaş and Kurşunlu, exit of Altıntaş, rocky slopes, 10 m, 40°21' N-28°59' E, 30.6.2001.
59. **Mudanya:** between Zeytinbağı and Esence, 5 km from Zeytinbağı, agricultural field, 80 m, 40°22' N-28°45' E, 20.7.2001.
60. **Mudanya:** between Zeytinbağı and Ayani, rocky field, 60 m, 40°23' N-28°44' E, 20.7.2001.
61. **Mudanya:** Esence village, around Turkish Radio and Television (TRT) Transmitter, open field, 30 m, 40°21' N-28°42' E, 20.7.2001.
62. **Mudanya:** between Söğütpınar and Çamlık, 1 km from Söğütpınar, 190 m, 40°20' N-28°29' E, 20.7.2001.
63. **Mudanya:** entrance of Emirleryenicesi village, 260 m, 40°19' N-28°37' E, 20.7.2001.
64. **Mudanya:** Çayönü village, 60 m, 40°18' N-28°40' E, 20.7.2001.
65. **Mudanya:** around Yörükyenicesi village, rocky field, 90 m, 40°17' N-28°42' E, 20.7.2001.
66. **Mudanya:** Hançerli village, roadside, 110 m, 40°18' N-28°44' E, 20.7.2001.
67. **Mudanya:** Hançerli village, around Hançerli Baba Tomb, oak woodland, 200 m, 40°19' N-28°44' E, 20.7.2001.
68. **Orhangazi:** Yeniköy, agricultural field, 130 m, 40°31' N-29°25' E, 30.7.2000.
69. **Orhangazi:** in the vicinity of Cihanköy, 220-280 m, 40°32' N-29°20' E, 30.7.2000.
70. **Orhangazi:** Üreğil village, 100 m, 40°31' N-29°25' E, 30.7.2000.
71. **Orhangazi:** between Üreğil and Mahmudiye, rocky field, 420 m, 40°32' N-29°25' E, 30.7.2000.
72. **Orhangazi:** Mahmudiye village, 560 m, 40°32' N-29°28' E, 30.7.2000.
73. **Orhangazi:** in the vicinity of Karsak, 70-150 m, 40°24' N-29°15' E, 5.8.2000.
74. **Orhangazi:** Gemiç village, 100 m, 40°24' N-29°16' E, 5.8.2000.
75. **Orhangazi:** Gürle village, 100 m, 40°24' N-29°17' E, 5.8.2000.
76. **Orhangazi:** Gölyaka village, 80 m, 40°25' N-29°22' E, 5.8.2000.
77. **Orhangazi:** Dutluca village, 80 m, 40°24' N-29°23' E, 5.8.2000.
78. **Orhangazi:** Yenisölöz village, olive grove, 280 m, 40°23' N-29°23' E, 5.8.2000.
79. **Orhangazi:** Gedelek village, rocky area, 150 m, 40°24' N-29°25' E, 12.8.2000.
80. **Orhangazi:** Çeltikçi village, 90-150 m, 40°28' N-29°17' E, 12.8.2000.
81. **Orhangazi:** Örnekköy, 80 m, 40°38' N-29°20' E, 12.8.2000.
82. **Orhangazi:** between Orhangazi and Hamzalı, 150 m, 40°30' N-29°18' E, 12.8.2000.
83. **Orhangazi:** in the vicinity of Hamzalı, 290-350 m, 40°31' N-29°16' E, 12.8.2000.
84. **Orhangazi:** between Orhangazi and Fındıklı, vicinity of lime pit, 280 m, 40°29' N-29°18' E, 12.8.2000.
85. **Orhangazi:** between Orhangazi and Fındıklı, 405 m, 40°29' N-29°16' E, 12.8.2000.
86. **Orhangazi:** Sölöz village, 200 m, 40°24' N-29°25' E, 2.9.2000.
87. **Orhangazi:** Heceler village, 110 m, 40°23' N-29°26' E, 2.9.2000.
88. **Orhangazi:** Narlıca village, 100-130 m, 40°23' N-29°29' E, 2.9.2000.

Results

In this study, a total of 88 localities were investigated and 181 lichen taxa representing 73 genera are reported

from Gemlik, İznik, Mudanya and Orhangazi districts. Of these specimens, 92 are from Gemlik, 144 from İznik, 88 from Mudanya and 81 from Orhangazi. *Arthonia dispersa*, *Lecanora sambuci* and *Opegrapha herbarum* are new records for Turkey. Sixty-two species are new records for Bursa province.

The list of species is given in alphabetical order.

Acarospora cervina A.Massal.

Loc. 8; 27; 30; on calcareous rock, (4364, 3737, 3853).

(+) **A. sinopica** (Wahlenb.) Körb.

Gemlik; between Hamidiye and Şükriye, rocky field, 350 m, on siliceous rock, 40°21' N-29°16' E, 20.5.2001, (4294). İznik; between Orhaniye and Sağırağıl, 3 km from Orhaniye, 280-360 m, on siliceous rock, 40°31' N-29°40' E, 11.3.2001, (3974). Mudanya; between Orhaniye and Çınarlı, agricultural field, 100 m, on siliceous rock, 40°18' N-28°47' E, 22.3.2001, (4117). Orhangazi; between Üreğil and Mahmudiye, rocky field, 420 m, on siliceous rock, 40°32' N-29°25' E, 30.7.2000, (3219).

Amandinea punctata (Hoffm.) Coppins & Scheid.

Loc. 33; on *Pinus* sp., (3914). Loc 42; 60; 71; on siliceous rock, (3083, 4509, 3224).

Anaptychia ciliaris (L.) Körb. ex A.Massal. subsp. *ciliaris*

Loc. 8; 19; on *Quercus* sp., (4357, 3617). Loc. 28; on *Phillyrea* sp., (3780).

(*) **Arthonia dispersa** (Schrad.) Nyl.

Mudanya; between Zeytinbağı and Esence, 5 km from Zeytinbağı, agricultural field, 80 m, on *Juglans* sp., on *Populus* sp., on *Pyrus* sp., 40°22' N-28°45' E, 20.7.2001, (4500, 4493, 4497).

Aspicilia caesiocinerea (Nyl. ex Malbr.) Arnold

Loc. 16; 42; 50; 73; on siliceous rock, (3558, 3104, 4152, 3263).

A. calcarea (L.) Mudd

Loc. 2; 8; 15; 20; 27; 30; 31; 35; 48; 60; 79; 83; 84; 88; on calcareous rock, (4261, 4355, 3542, 3631, 3724, 3852, 3875, 3969, 4119, 4515, 3773, 3465, 3481, 3538).

A. cinerea (L.) Körb.

Loc. 3; 8; 10; 12; 16; 28; 35; 37; 42; on siliceous rock, (4293, 4362, 4407, 4434, 3559, 3740, 3976, 4045, 3080).

A. contorta (Hoffm.) Kremp.

Loc. 2; 33; on calcareous rock, (4259, 3925).

(+) **Bacidia rubella** (Hoffm.) A.Massal.

İznik; between İznik and İhsaniye, 7 km from İznik, 650 m, on *Cornus mas*, on *Phillyrea* sp., 40°28' N-29°49' E, 15.10.2000, (3778, 3791).

Bagliettoa parmigera (J.Steiner) Vézda & Poelt

Loc. 8; 15; 30; 33; 35; 74; 84; on calcareous rock, (4352, 3548, 3864, 3927, 3971, 3383, 3480).

Buellia aethalea (Ach.) Th.Fr.

Loc. 3; 71; on siliceous rock, (4285, 3223).

(+) **Caloplaca alociza** (A.Massal.) Mig.

Orhangazi; between Orhangazi and Fındıklı, vicinity of lime pit, 280 m, on calcareous rock, 40°29' N-29°18' E, 12.8.2000, (3482).

(+) **C. atroflava** (Turner) Mong.

Orhangazi; between Üreğil and Mahmudiye, rocky field, 420 m, on siliceous rock, 40°32' N-29°25' E, 30.7.2000, (3220).

(+) **C. aurantia** (Pers.) J.Steiner

Gemlik; Şahintepe, maquis field, 650 m, on calcareous rock, 40°28' N-29°13' E, 3.6.2001, (4354). İznik; in the vicinity of Demirışık, rocky area, 80 m, on calcareous rock, 40°23' N-29°34' E, 2.9.2000, (3543). Between İznik and Elbeyli, rocky field, 130 m, on calcareous rock, 40°28' N-29°44' E, 11.2.2001, (3862). Between Orhaniye and Sağırağıl, 3 km from Orhaniye, 280-360 m, on calcareous rock, 40°31' N-29°40' E, 11.3.2001, (3968). Orhangazi; Gedelek village, rocky area, 150 m, on calcareous rock, 40°24' N-29°25' E, 12.8.2000, (3381).

C. cerina (Ehrh. ex Hedw.) Th.Fr. var. *cerina*

Loc. 6; 80; on *Cupressus* sp., (4338, 3391). Loc. 9; on *Platanus* sp., (4375). Loc. 13; 19; 34; on *Quercus* sp., (4478, 3621, 3934). Loc. 20; 49; 51; 79; on *Juglans* sp., (3648, 4139, 4168, 3363.). Loc. 28; on *Cornus mas*, on *Phillyrea* sp., (3777, 3785). Loc. 32; 45; 47; on *Morus* sp., (3903, 3140, 4086). Loc. 35; on *Olea* sp.,

(3955). Loc. 42; on *Salix* sp., (3101). Loc. 48; 54; 56; 59; 88; on *Populus* sp., (4123, 4206, 4449, 4491, 3533). Loc. 75; on *Juglans* sp., on *Quercus* sp., (3305, 3293). Loc. 82; on *Tilia* sp., (3435).

(+) *Caloplaca cerinella* (Nyl.) Flagey

Gemlik; between Umurbey and Adliye, entrance of Adliye, roadside, 220 m, on *Cupressus* sp., 40°24' N-29°11' E, 20.5.2001, (4341). Between Büyükkumla and Haydariye, Ayvalık, 200-400 m, on *Platanus* sp., 40°29' N-29°06' E, 3.6.2001, (4391). İznik; in the vicinity of Aydınlar, agricultural field, 110-270 m, on *Prunus* sp., 40°23' N-29°39' E, 2.9.2000, (3566). In the vicinity of Şerefiye, 120-300 m, on *Prunus* sp., 40°24' N-29°46' E, 20.9.2000, (3636). In the vicinity of Kaynarca, agricultural field, 250 m, on *Salix* sp., 40°25' N-29°51' E, 20.9.2000, (3693). Mudanya; around Bademli, Meşeliköy, oak woodland, 140 m, on *Populus* sp., 40°17' N-28°55' E, 27.7.2000, (3157). Around İpekyayla village, agricultural field, 350 m, on *Ficus* sp., 40°20' N-28°50' E, 22.3.2001, (4187). Orhangazi; in the vicinity of Karsak, 70-150 m, on *Quercus* sp., 40°24' N-29°15' E, 5.8.2000, (3244). Gemiç village, 100 m, on *Cupressus* sp., 40°24' N-29°16' E, 5.8.2000, (3278). Gürle village, 100 m, on *Juglans* sp., on *Quercus* sp., 40°24' N-29°17' E, 5.8.2000, (3294, 3307). Gölyaka village, 80 m, on *Populus* sp., on *Salix* sp., 40°25' N-29°22' E, 5.8.2000, (3311, 3309). Between Orhangazi and Hamzalı, 150 m, on *Acer* sp., on *Quercus* sp., 40°30' N-29°18' E, 12.8.2000, (3426, 3423).

C. cerinelloides (Erichsen) Poelt

Loc. 40; on *Juglans* sp., (3064).

(+) *C. citrina* (Hoffm.) Th.Fr.

Mudanya; Kumyaka village, around church, 0 m, on calcareous wall, 40°23' N-28°51' E, 27.7.2000, (3056). Zeytinbağı village, 10 m, on concrete, on wall, 40°24' N-28°48' E, 27.7.2000, (3107, 3106). Hañerli village, roadside, 110 m, on calcareous rock, 40°18' N-28°44' E, 20.7.2001, (4551). Orhangazi; Mahmudiye village, 560 m, on siliceous rock, 40°32' N-29°28' E, 30.7.2000, (3232). In the vicinity of Karsak, 70-150 m, on siliceous rock, 40°24' N-29°15' E, 5.8.2000, (3261). Çeltikçi village, 90-150 m, on graveyard wall, 40°28' N-29°17' E, 12.8.2000, (3400). In the vicinity of Hamzalı, 290-350 m, on calcareous rock, on mortar, 40°31' N-29°16' E, 12.8.2000, (3477, 3475). Sölöz village, 200 m, on calcareous rock, 40°24' N-29°25' E, 2.9.2000, (3508).

C. chrysodeta (Vain. ex Räsänen) Dombro.

Loc. 16; on calcareous rock, (3555).

(+) *C. coronata* (Kremp. ex Körb.) J.Steiner

Mudanya; Zeytinbağı village, 10 m, on tile, 40°24' N-28°48' E, 27.7.2000, (3117).

C. crenularia (With.) J.R.Laundon

Loc. 3; 11; 27; 42; on siliceous rock, (4281, 4428, 3727, 3077).

(+) *C. crenulatella* (Nyl.) H.Olivier

İznik; between İznik and Elbeyli, rocky field, 130 m, on calcareous rock, 40°28' N-29°44' E, 11.2.2001, (3859). Between Elbeyli and Ömerli, 300 m, on calcareous rock, 40°30' N-29°43' E, 11.2.2001, (3878). Between İnikli and Gürmüzlü, *Pinus* sp. forest, 350 m, on calcareous rock, 40°31' N-29°45' E, 11.2.2001, (3924). Mudanya; between Orhaniye and Çınarlı, agricultural field, 100 m, on calcareous rock, 40°18' N-28°47' E, 22.3.2001, (4115). Between Zeytinbağı and Ayani, rocky field, 60 m, on calcareous rock, 40°23' N-28°44' E, 20.7.2001, (4519). Orhangazi; between Orhangazi and Fındıklı, vicinity of lime pit, 280 m, on calcareous rock, 40°29' N-29°18' E, 12.8.2000, (3485). Sölöz village, 200 m, on calcareous rock, 40°24' N-29°25' E, 2.9.2000, (3509).

C. decipiens (Arnold) Blomb. & Forssell

Loc. 43; on calcareous rock, on tile, (3108, 3121).

(+) *C. demissa* (Körb.) Arup & Grube

İznik; Göllüce village, 100-250 m, on tile, 40°23' N-29°36' E, 2.9.2000, (3551). Mudanya; Kumyaka village, around church, 0 m, on tile, 40°23' N-28°51' E, 27.7.2000, (3061). Çayönü village, 60 m, on tile, 40°18' N-28°40' E, 20.7.2001, (4544). Orhangazi; in the vicinity of Karsak, 70-150 m, on tile, 40°24' N-29°15' E, 5.8.2000, (3268). Çeltikçi village, 90-150 m, on tile, 40°28' N-29°17' E, 12.8.2000, (3405). Örnekköy, 80 m, on tile, 40°38' N-29°20' E, 12.8.2000 (3420).

(+) *C. dolomiticola* (Hue) Zahlbr.

Gemlik; Şahintepe, maquis field, 650 m, on calcareous rock, 40°28' N-29°13' E, 3.6.2001, (4363). İznik; between Elbeyli and Ömerli, 300 m, on calcareous rock, 40°30' N-29°43' E, 11.2.2001, (3873). Mudanya; Kumyaka village, around church, 0 m, on calcareous wall, 40°23' N-28°51' E, 27.7.2000, (3059). Between

Mudanya and Mirzeoba, olive grove, 250 m, on siliceous rock, 40°22' N-28°47' E, 27.7.2000, (3084). Between Zeytinbağı and Ayani, rocky field, 60 m, on calcareous rock, 40°23' N-28°44' E, 20.7.2001, (4512).

(+) *Caloplaca erythrocarpa* (Pers.) Zwackh

İzник; between İznik and İhsaniye, 3 km from İznik, rocky field, 250 m, on calcareous rock, 40°27' N-29°46' E, 15.10.2000, (3751). Between İznik and Elbeyli, rocky field, 130 m, on calcareous rock, 40°28' N-29°44' E, 11.2.2001, (3856). Between İnikli and Gürmüzlü, *Pinus* sp. forest, 350 m, on calcareous rock, 40°31' N-29°45' E, 11.2.2001, (3920). Between Orhaniye and Sağırağıl, 3 km from Orhaniye, 280-360 m, on calcareous rock, 40°31' N-29°40' E, 11.3.2001, (3982).

C. ferruginea (Huds.) Th.Fr.

Loc. 67; on *Quercus* sp., (4562).

C. flavescens (Huds.) J.R.Laundon

Loc. 33; on calcareous rock, (3918).

(+) *C. flavorubescens* (Huds.) J.R.Laundon

Gemlik; between Şükriye and Fındıcak, 5 km from Şükriye, 650 m, on *Pyrus elaeagnifolia*, on *Quercus* sp., 40°20' N-29°18' E, 20.5.2001, (4332, 4326). Between Bursa and Gemlik, around Kurtul, roadside, 90 m, on *Juglans* sp., 40°22' N-29°07' E, 30.6.2001, (4484). İznik; in the vicinity of Şerefiye, 120-300 m, on *Juglans* sp., 40°24' N-29°46' E, 20.9.2000, (3652). Gürmüzlü village, 560 m, on *Phillyrea* sp., 40°31' N-29°46' E, 11.2.2001, (3948). Mudanya; around İpekyayla village, agricultural field, 350 m, on *Morus* sp., 40°20' N-28°50' E, 22.3.2001, (4175).

C. holocarpa (Hoffm.) A.E.Wade

Loc. 1; on *Juglans* sp., on *Populus* sp., on *Prunus* sp., (4235, 4225, 4231). Loc. 2; 36; on *Quercus* sp., (4254, 4007). Loc. 17; on *Juglans* sp., on *Populus* sp., (3578, 3565). Loc. 18; 73; 81; 87; on *Populus* sp., (3584, 3258, 3415, 3527). Loc. 20; on *Juglans* sp., on *Pinus* sp., on *Populus* sp., (3647, 3633, 3641). Loc. 22; on *Populus* sp., on *Salix* sp., (3657, 3662). Loc. 24; on *Salix* sp., (3691). Loc. 26; on *Platanus* sp., (3706). Loc. 28; on *Cornus mas*, on *Ilex* sp., on *Phillyrea* sp., (3774, 3801, 3787). Loc. 29; on *Cornus mas*, (3845). Loc. 32; on *Morus* sp., (3902). Loc. 34; on *Phillyrea* sp., (3948). Loc. 42; on siliceous rock, on *Pistacia* sp., (3082, 3103). Loc. 43; 58; on calcareous rock, (3112, 4466). Loc. 48; on

Ficus sp., on *Populus* sp., (4103, 4093). Loc. 49; 59; 72; 77; on *Juglans* sp., (4140, 4501, 3233, 3317). Loc. 54; on *Ficus* sp., on *Populus* sp., (4214, 4207). Loc. 56; on *Ficus* sp., on *Populus* sp., (4443, 4450). Loc. 68; on *Platanus* sp., on *Salix* sp., (3168, 3178). Loc. 71; on mortar, (3225). Loc. 75; on *Juglans* sp., on *Quercus* sp., (3303, 3285). Loc. 78; on *Populus* sp., on *Salix* sp., (3326, 3345). Loc. 79; on *Juglans* sp., on *Populus* sp., on *Prunus* sp., (3361, 3354, 3368). Loc. 83; on *Pinus* sp., (3440). Loc. 86; on *Morus* sp., on *Populus* sp., (3504, 3502).

C. lactea (A.Massal.) Zahlbr.

Loc. 2; 19; 30; on calcareous rock, (4256, 3614, 3855).

(+) *C. ochracea* (Schaer.) Flagey

İzник; in the vicinity of Demirşık, rocky area, 80 m, on calcareous rock, 40°23' N-29°34' E, 2.9.2000, (3541). Orhangazi; Gedelek village, rocky area, 150 m, on calcareous rock, 40°24' N-29°25' E, 12.8.2000, (3384).

C. saxicola (Hoffm.) Nordin

Loc. 31; 43; on calcareous rock, (3881, 3109). Loc. 39; on calcareous wall, (3055).

C. variabilis (Pers.) Müll.Arg.

Loc. 8; 27; 30; 31; 35; 83; on calcareous rock, (4353, 3722, 3860, 3876, 3983, 3471).

C. xantholyta (Nyl.) Jatta

Loc. 39; on tile, (3060).

Candelariella aurella (Hoffm.) Zahlbr.

Loc. 2; 16; 20; 27; 30; 31; 35; 43; 60; 71; calcareous rock, (4258, 3554, 3628, 3720, 3851, 3874, 3981, 3111, 4517, 3217). Loc. 64; 81; on tile, (4542, 3408). Loc. 67; on graveyard wall, (4558). Loc. 72; on calcareous rock, on tile (3228, 3237).

(+) *C. medians* (Nyl.) A.L.Sm.

İzник; Göllüce village, 100-250 m, on tile, 40°23' N-29°36' E, 2.9.2000, (3550). Between Elbeyli and Ömerli, 300 m, on calcareous rock, 40°30' N-29°43' E, 11.2.2001, (3880). Mudanya; Zeytinbağı village, 10 m, on tile, 40°24' N-28°48' E, 27.7.2000, (3116). Çayönü village, 60 m, on tile, 40°18' N-28°40' E, 20.7.2001, (4546). Hançerli village, roadside, 110 m, on calcareous rock, 40°18' N-28°44' E, 20.7.2001, (4541).

Candelariella vitellina (Hoffm.) Müll.Arg.

Loc. 1; 32; on *Prunus* sp., (4232, 3896). Loc. 3; *Salix* sp., on siliceous rock, (4267, 4292). Loc. 4; 10; 11; 42; 50; 71; on siliceous rock, (4305, 4417, 4424, 3081, 4156, 3221). Loc. 5; on *Pyrus elaeagnifolia*, on *Quercus* sp., (4333, 4323). Loc. 19; on *Quercus* sp., (3622). Loc. 22; on *Salix* sp., (3665). Loc. 28; on *Ilex* sp., on siliceous rock, (3802, 3746). Loc. 34; on *Phillyrea* sp., on *Quercus* sp., (3941, 3950). Loc. 35; on *Olea* sp., on siliceous rock, (3952, 3973). Loc. 69; 75; on *Ficus* sp., (3195, 3301). Loc. 73; on *Quercus* sp., on tile, (3241, 3267). Loc. 78; on *Olea* sp., on *Prunus* sp., (3342, 3331). Loc. 80; on *Celtis* sp., on tile, (3396, 3406). Loc. 82; on *Tilia* sp., (3432). Loc. 87; on *Celtis* sp., (3512).

Catillaria chalybeia (Borrer) A.Massal.

Loc. 20; on siliceous rock, (3639). Loc. 43; on tile, (3119).

(+) **Cetraria aculeata** (Schreb.) Fr.

Gemlik; Şahintepe, maquis field, 650 m, on soil, 40°28' N-29°13' E, 3.6.2001, (4356).

(+) **Cladonia coniocraea** (Flörke) Spreng.

İznik; between İznik and İhsaniye, 7 km from İznik, 650 m, on *Quercus* sp., 40°28' N-29°49' E, 15.10.2000, (3810).

Cl. convoluta (Lam.) Anders

Loc. 10; 33; on soil, (4410, 3915). Loc. 27; on calcareous soil, (3713). Loc. 35; on siliceous soil, (3960). Loc. 41; on calcareous rock, (3069)

Cl. fimbriata (L.) Fr.

Loc. 23; 38; on log, (3681, 4074). Loc. 27; on calcareous soil, (3712). Loc. 28; on *Pinus* sp., on *Quercus* sp., on siliceous soil, (3769, 3808, 3765). Loc. 33; on log, on *Pinus* sp., (3928, 3929).

Cl. foliacea (Huds.) Willd.

Loc. 3; 4; on siliceous rock, (4282, 4301). Loc. 9; on soil, (4365). Loc. 10; 28; on rock, (4406, 3759). Loc. 30; on calcareous soil, (3871). Loc. 31; 33; on siliceous soil, (3887, 3917).

Cl. furcata (Huds.) Schrad.

Loc. 9; on soil, (4367). Loc. 27; on siliceous soil, (3711).

Cl. pocillum (Ach.) Grognot

Loc. 41; 88; on calcareous rock, (3068, 3537). Loc. 58; on calcareous soil, (4472). Loc. 83; at the base of *Quercus* sp., (3447).

Cl. pyxidata (L.) Hoffm.

Loc. 3; 4; 19; on siliceous rock, (4283, 4303, 3616). Loc. 7; 10; 35; on siliceous soil, (4345, 4412, 3962). Loc. 28; on rock, on siliceous soil, (3758, 3764). Loc. 33; on *Pinus* sp., (3910). Loc. 38; together with moss on log, on siliceous soil, (4075, 4053).

Cl. rangiformis Hoffm.

Loc. 7; 19; 28; 35; 38; on siliceous soil, (4344, 3615, 3766, 3961, 4073). Loc. 9; 10; 12; 23; 27; 33; 41; 42; 49; 55; 58; on soil, (4371, 4413, 4439, 3684, 3738, 3916, 3070, 3100, 4141, 4221, 4473). Loc. 53; on log, (4197).

(+) **Cl. symphyocarpa** (Ach.) Fr.

Gemlik; between Büyükkumla and Haydariye, Ayvalık, 200-400 m, on siliceous soil, 40°29' N-29°06' E, 3.6.2001, (4369). Karacaali, Şelale, 370 m, on siliceous soil, 40°29' N-29°04' E, 3.6.2001, (4409). Between Narlı and Kapaklı, exit of Narlı, rocky field, 0-20 m, on soil, 40°28' N-29°00' E, 3.6.2001, (4438).

Clauzadea monticola (Ach. ex Schaer.) Hafellner & Bellem.

Loc. 28; 83; on calcareous rock, (3743, 3469).

Collema crispum (Huds.) Weber ex Wigg.

Loc. 30; 31; 79; on calcareous rock, (3865, 3890, 3376).

C. cristatum (L.) Weber ex Wigg.

Loc. 15; 58; on calcareous rock, (3546, 4471).

(+) **C. furfuraceum** (Arnold) Du Rietz

İznik; between İznik and İhsaniye, 7 km from İznik, 650 m, on *Phillyrea* sp., 40°28' N-29°49' E, 15.10.2000, (3479).

C. polycarpon Hoffm.

Loc. 15; on calcareous rock, (3545).

(+) **C. subflaccidum** Degel.

İznik; in the vicinity of Aydınlar, agricultural field, 110-270 m, on *Quercus* sp., 40°23' N-29°39' E, 2.9.2000, (3574). Mudanya; around Dereköy village,

agricultural field, 240 m, on *Juglans* sp., 40°20' N-28°48' E, 22.3.2001, (4166).

(+) *Degelia plumbea* (Lightf.) P.M.Jørg. & P.James

İzник; between İznik and İhsaniye, 7 km from İznik, 650 m, together with moss on rock, 40°28' N-29°49' E, 15.10.2000, (3763).

Dermatocarpon miniatum (L.) W.Mann

Loc. 10; on siliceous rock, (4420).

Diploschistes muscorum (Scop.) R.Sant.

Loc. 10; on basal squamules of *Cladonia* sp. on *Olea* sp., (4398).

D. ocellatus (Vill.) Norman

Loc. 30; 33; on calcareous rock, (3866, 3926).

D. scruposus (Schreb.) Norman

Loc. 27; on siliceous rock, (3736).

(+) *Diplotomma alboatrum* (Hoffm.) Flot.

Gemlik; Muratoba village, agricultural field, 60 m, on *Populus* sp., 40°23' N-29°11' E, 20.5.2001, (4228). İznik; between İznik and İhsaniye, 1 km from İznik, 110 m, on *Platanus* sp., 40°26' N-29°44' E, 15.10.2000, (3709). Mudanya; between Orhaniye and Çınarlı, agricultural field, 100 m, on *Populus* sp., 40°18' N-28°47' E, 22.3.2001, (4092). Around Dereköy village, agricultural field, 240 m, on *Juglans* sp., 40°20' N-28°48' E, 22.3.2001, (4170). Around İpekyayla village, agricultural field, 350 m, on *Morus* sp., 40°20' N-28°50' E, 22.3.2001, (4178). Between Çepni and Akköy, entrance of Akköy, 350 m, on *Populus* sp., 40°19' N-28°51' E, 22.3.2001, (4210). Around Göynüklü village, roadside, 200 m, on *Populus* sp., 40°29' N-28°58' E, 30.6.2001, (4451). Esence village, around TRT Transmitter, open field, 30 m, on *Quercus* sp., 40°21' N-28°42' E, 20.7.2001, (4526). Orhangazi; Yeniköy, agricultural field, 130 m, on *Platanus* sp., 40°31' N-29°25' E, 30.7.2000, (3176). Yenisölöz village, olive grove, 280 m, on *Populus* sp., 40°23' N-29°23' E, 5.8.2000, (3327). Çeltikçi village, 90-150 m, on *Cupressus* sp., 40°28' N-29°17' E, 12.8.2000, (3392). Heceler village, 110 m, on *Populus* sp., 40°23' N-29°26' E, 2.9.2000, (3526).

D. chlorophaeum (Hepp ex Leight.) Szatala

Loc. 3; 16; 27; 73; on siliceous rock, (4277, 3556, 3723, 3265). Loc. 20; 50; 60; on calcareous rock, (3632, 4157, 4510).

D. epipolium (Ach.) Arnold

Loc. 30; 35; 58; 60; 79; on calcareous rock, (3867, 3980, 4469, 4514, 3378).

(+) *Eopyrenula leucoplaca* (Wallr.) R.C.Harris

Orhangazi; Yenisölöz village, olive grove, 280 m, on *Salix* sp., 40°23' N-29°23' E, 5.8.2000, (3344).

Evernia prunastri (L.) Ach.

Loc. 2; 17; 36; 37; 46; 49; 74; on *Quercus* sp., (4263, 3575, 3999, 4039, 3145, 4144, 3275). Loc. 9; on *Erica* sp., (4381). Loc. 10; on *Platanus* sp., (4403). Loc. 19; on *Crataegus* sp., (3588). Loc. 23; on *Phillyrea* sp., on *Pinus* sp., (3685, 3674). Loc. 28; on *Ilex* sp., on *Pinus* sp., on *Quercus* sp., (3796, 3767, 3804). Loc. 29; on *Crataegus* sp., on *Quercus* sp., (3832, 3826). Loc. 32; on *Prunus* sp., (3898). Loc. 35; on *Olea* sp., (3992). Loc. 38; on *Pinus* sp., (4061). Loc. 83; on *Crataegus* sp., on *Quercus* sp., (3462, 3456).

Flavoparmelia caperata (L.) Hale

Loc. 38; on *Pinus* sp., (4065). Loc. 49; on *Quercus* sp., (4135).

Fulgensia fulgens (Sw.) Elenkin

Loc. 35; together with moss on calcareous soil, (3963).

(+) *Hypocenomyce scalaris* (Ach. ex Lilj.) M.Choisy

İznik; in the vicinity of Mecidiye, 490 m, on *Pinus* sp., 40°35' N-29°42' E, 11.3.2001, (4068).

(+) *Hypogymnia farinacea* Zopf

Gemlik; between Büyükkumla and Haydariye, Ayvalık, 200-400 m, on *Erica* sp., 40°29' N-29°06' E, 3.6.2001, (4390)

H. physodes (L.) Nyl.

Loc. 5; 38; on *Pinus* sp., (4335, 4062). Loc. 10; on log, (4404). Loc. 19; on *Crataegus* sp., (3612). Loc. 28; on siliceous rock, (3753). Loc. 49; on *Quercus* sp., (4134).

H. tubulosa (Schaer.) Hav.

Loc. 2; on *Quercus* sp., (4252). Loc. 28; on siliceous rock, (3756).

(+) *Lecania crytella* (Ach.) Th.Fr.

İznik; in the vicinity of Aydınlar, agricultural field, 110-270 m, on *Quercus* sp., 40°23' N-29°39' E,

2.9.2000, (3571). In the vicinity of Mecidiye, 490 m, on *Pinus* sp., 40°35' N-29°42' E, 11.3.2001, (4071). Orhangazi; Gürle village, 100 m, on *Ficus* sp., on *Juglans* sp., 40°24' N-29°17' E, 5.8.2000, (3300, 3306). Çeltikçi village, 90-150 m, on *Morus* sp., 40°28' N-29°17' E, 12.8.2000, (3399).

(+) *Lecania fuscella* (Schaer.) Körb.

Gemlik; Muratoba village, agricultural field, 60 m, on *Populus* sp., 40°23' N-29°11' E, 20.5.2001, (4227). İznik; between Çiçekli and Çamoluk, 250 m, on *Phillyrea* sp., 40°24' N-29°48' E, 20.9.2000, (3673). Mudanya; between Orhaniye and Çınarlı, agricultural field, 100 m, on *Populus* sp., 40°18' N-28°47' E, 22.3.2001, (4091). Between Zeytinbağı and Esence, 5 km from Zeytinbağı, agricultural field, 80 m, on *Juglans* sp., 40°22' N-28°45' E, 20.7.2001, (4503). Orhangazi; Yeniköy, agricultural field, 130 m, on *Platanus* sp., 40°31' N-29°25' E, 30.7.2000, (3175).

(+) *L. rabenhorstii* (Hepp) Arnold

Orhangazi; between Orhangazi and Fındıklı, vicinity of lime pit, 280 m, on calcareous rock, 40°29' N-29°18' E, 12.8.2000, (3484).

Lecanora albella (Pers.) Ach.

Loc. 79; on *Cerasus avium*, (3350).

(+) *L. albescens* (Hoffm.) Branth & Rostr.

İznik; between İznik and İhsaniye, 3 km from İznik, rocky field, 250 m, on siliceous rock, 40°27' N-29°46' E, 15.10.2000, (3730). In the vicinity of Süleymaniye, 500 m, on siliceous rock, 40°34' N-29°41' E, 11.3.2001, (4049). Mudanya; Kumyaka village, around church, 0 m, on calcareous wall, 40°23' N-28°51' E, 27.7.2000, (3057). Zeytinbağı village, 10 m, on concrete, 40°24' N-28°48' E, 27.7.2000, (3128). Çayönü village, 60 m, on tile, 40°18' N-28°40' E, 20.7.2001, (4543). Hançerli village, roadside, 110 m, on calcareous rock, 40°18' N-28°44' E, 20.7.2001, (4550). Orhangazi; in the vicinity of Hamzalı, 290-350 m, on calcareous rock, 40°31' N-29°16' E, 12.8.2000, (3478).

Lecanora argentata (Ach.) Malme

Loc. 1; 42; 56; 78; 86; on *Populus* sp., (4240, 3092, 4445, 3325, 3511). Loc. 2; on *Pyrus* sp., (4248). Loc. 13; 61; on *Quercus* sp., (4476, 4529). Loc. 14; 49; 51; 73; 77; on *Juglans* sp., (4483, 4137, 4165, 3251, 3318). Loc. 22; on *Populus* sp., on *Salix* sp., (3658,

3664). Loc. 45; on *Morus* sp., on *Amygdalus* sp., (3141, 3137). Loc. 47; on *Morus* sp., on *Prunus* sp., (4081, 4077). Loc. 48; on *Olea* sp., on *Populus* sp., (4095, 4096). Loc. 52; 68; on *Morus* sp., (4190, 3161). Loc. 54; on *Ficus* sp., (4213). Loc. 59; on *Juglans* sp., on *Populus* sp., (4499, 4508). Loc. 87; on *Ficus* sp., on *Populus* sp., (3524, 3523).

L. campestris (Schaer.) Hue

Loc. 10; 27; 35; 42; 71; 73; on siliceous rock, (4421, 3728, 3987, 3073, 3215, 3262). Loc. 19; 58; on calcareous rock, (3613, 4467). Loc. 43; on tile, (3126).

L. carpinea (L.) Vain.

Loc. 2; 4; 8; 13; 25; 34; 36; 37; 49; 85; on *Quercus* sp., (4244, 4311, 4359, 4479, 3699, 3933, 4002, 4038, 4133, 3493). Loc. 3; on *Salix* sp., (4268). Loc. 5; on *Quercus* sp., (4321). Loc. 9; 68; on *Platanus* sp., (4383, 3173). Loc. 19; on *Crataegus* sp., on *Quercus* sp., (3593, 3605). Loc. 20; 73; on *Juglans* sp., (3650, 3247). Loc. 28; on *Phillyrea* sp., on *Quercus* sp., (3783, 3812). Loc. 29; on *Crataegus* sp., on *Quercus* sp., (3835, 3822). Loc. 32; on *Prunus* sp., (3894). Loc. 42; on *Pistacia* sp., (3088). Loc. 45; 57; on *Amygdalus* sp., (3136, 4458). Loc. 46; on *Populus* sp., on *Quercus* sp., (3156, 3146). Loc. 47; on *Morus* sp., (4087). Loc. 48; 56; on *Ficus* sp., (4102, 4383). Loc. 52; on *Ficus* sp., on *Morus* sp., (4186, 4179). Loc. 53; on *Ficus* sp., on *Prunus* sp., (4196, 4191). Loc. 54; on *Populus* sp., (4204). Loc. 69; on *Olea* sp., (3196). Loc. 75; on *Ficus* sp., on *Quercus* sp., (3297, 3289). Loc. 78; on *Mespilus* sp., on *Olea* sp., on *Prunus* sp., on *Pyrus* sp., (3346, 3341, 3333, 3338). Loc. 79; on *Juglans* sp., on *Platanus* sp., (3366, 3369). Loc. 80; 87; on *Celtis* sp., (3397, 3514). Loc. 82; on *Tilia* sp., (3436). Loc. 83; on *Quercus* sp., on *Tilia* sp., (3452, 3473).

L. chlarotera Nyl.

Loc. 2; 7; 8; 13; 25; 37; 49; 67; 69; 83; on *Quercus* sp., (4245, 4343, 4360, 4477, 3697, 4052, 4132, 4557, 3188, 3450). Loc. 3; 22; on *Salix* sp., (4270, 3663). Loc. 5; on *Pyrus elaeagnifolia*, on *Quercus* sp., (4329, 4320). Loc. 10; on *Platanus* sp., (4399). Loc. 19; on *Crataegus* sp., on *Quercus* sp., (3591, 3600). Loc. 27; on *Phillyrea* sp., (3716). Loc. 28; on *Phillyrea* sp., on *Quercus* sp., (3786, 3807). Loc. 32; on *Pinus* sp., (3913). Loc. 34; on *Phillyrea* sp., on *Quercus* sp., (3945, 3931). Loc. 35; on *Olea* sp., on *Quercus* sp., (3956, 3958). Loc. 36; on *Crataegus* sp., on *Quercus* sp., (4018,

4012). Loc. 40; on *Juglans* sp., on *Olea* sp., (3063, 3066). Loc. 42; on *Salix* sp., on *Pistacia* sp., (3098, 3099). Loc. 45; 57; on *Amygdalus* sp., (3135, 4455). Loc. 46; on *Populus* sp., on *Quercus* sp., (3153, 3148). Loc. 47; 53; on *Prunus* sp., (4076, 4192). Loc. 48; 56; on *Ficus* sp., (4101, 4440). Loc. 50; on *Pyrus elaeagnifolia*, (4148). Loc. 51; on *Juglans* sp., (4169). Loc. 52; on *Morus* sp., (4174). Loc. 54; on *Ficus* sp., on *Populus* sp., (4216, 4205). Loc. 68; on *Platanus* sp., on *Salix* sp., (3171, 3185). Loc. 70; on *Acacia* sp., on *Olea* sp., (3199, 3210). Loc. 73; on *Juglans* sp., on *Quercus* sp., (3246, 3239). Loc. 75; on *Ficus* sp., on *Quercus* sp., (3302, 3288). Loc. 78; on *Olea* sp., on *Populus* sp., on *Pyrus* sp., (3340, 3324, 3337). Loc. 79; on *Juglans* sp., on *Platanus* sp., (3364, 3370). Loc. 80; on *Celtis* sp., on *Ficus* sp., (3394, 3398). Loc. 82; on *Tilia* sp., (3433). Loc. 85; on *Pyrus* sp., on *Quercus* sp., (3500, 3489). Loc. 87; on *Celtis* sp., (3517).

(+) *Lecanora crenulata* Hook.

İznik; Drazali village, 80 m, on mortar, 40°24' N-29°43' E, 20.9.2000, (3585). Between Elbeyli and Ömerli, 300 m, on calcareous rock, 40°30' N-29°43' E, 11.2.2001, (3877). Orhangazi; in the vicinity of Hamzalı, 290-350 m, on calcareous rock, 40°31' N-29°16' E, 12.8.2000, (3470). Between Orhangazi and Findıklı, vicinity of lime pit, 280 m, on calcareous rock, 40°29' N-29°18' E, 12.8.2000, (3486).

L. dispersa (Pers.) Sommerf.

Loc. 2; 20; 50; 60; 71; 83; 84; on calcareous rock, (4260, 3627, 4154, 4520, 3216, 3476, 3488). Loc. 3; 35; 48; 73; 86; on siliceous rock, (4287, 3990, 4114, 3260, 3510). Loc. 16; 81; on tile, (3563, 3409). Loc. 43; on tile, on calcareous rock, (3120, 3110). Loc. 67; 80; on graveyard wall, (4559, 3401). Loc. 72; on tile, on siliceous rock, (3235, 3227).

L. hagenii (Ach.) Ach.

Loc. 1; on *Juglans* sp., on *Olea* sp., on *Populus* sp., on *Prunus* sp., (4236, 4237, 4226, 4233). Loc. 3; 42; on *Salix* sp., (4271, 3095). Loc. 5; 29; on *Quercus* sp., (4327, 3824). Loc. 6; on *Cupressus* sp., (4337). Loc. 13; 16; 44; 45; 57; 74; on *Olea* sp., (4480, 3562, 3129, 3132, 4459, 3280). Loc. 17; 77; on *Juglans* sp., (3579, 3317). Loc. 20; on *Ficus* sp., on *Juglans* sp., on *Populus* sp., (3638, 3651, 3643). Loc. 22; 48; 81; on *Populus* sp., (3659, 4094, 3416). Loc. 24; on *Malus* sp., on *Salix* sp., (3686, 3692). Loc. 26; on *Olea* sp., on *Platanus* sp., (3710, 3705). Loc. 28; on *Cornus mas*, on *Ilex* sp., on

Phillyrea sp., (3775, 3803, 3789). Loc. 34; on *Phillyrea* sp., (3939). Loc. 52; on *Ficus* sp., on *Olea* sp., on *Pyrus elaeagnifolia*, (4184, 4183, 4185). Loc. 54; on *Ficus* sp., (4215). Loc. 68; on *Platanus* sp., on *Salix* sp., (3169, 3180). Loc. 73; on *Juglans* sp., on *Olea* sp., *Populus* sp., on *Quercus* sp., (3250, 3255, 3259, 3245). Loc. 75; on *Juglans* sp., on *Quercus* sp., (3304, 3287). Loc. 78; on *Prunus* sp., on *Pyrus* sp., on *Salix* sp., (3332, 3339, 3343). Loc. 80; 86; 88; on *Morus* sp., (3389, 3506, 3535). Loc. 87; on *Platanus* sp., (3529).

(+) *L. rupicola* (L.) Zahlbr. ssp. *rupicola*

Gemlik; between Hayriye and Narlı, around Selimiye, rocky field, 400 m, on siliceous rock, 40°30' N-29°00' E, 3.6.2001, (4431).

L. rupicola (L.) Zahlbr. subsp. *subplanata* (Nyl.) Leuckert & Poelt

Loc. 28; on siliceous rock, (3739).

(*) *L. sambuci* (Pers.) Nyl.

İznik; between Ömerli and Tacir, 400 m, on *Morus* sp., 40°31' N-29°44' E, 11.2.2001, (3906). Mudanya; around İpekyayla village, agricultural field, 350 m, on *Morus* sp., 40°20' N-28°50' E, 22.3.2001, (4176). Between Çepni and Akköy, entrance of Akköy, 350 m, on *Populus* sp., 40°19' N-28°51' E, 22.3.2001, (4208). Between Zeytinbağı and Esence, 5 km from Zeytinbağı, agricultural field, 80 m, on *Juglans* sp., 40°22' N-28°45' E, 20.7.2001, (4504).

(+) *L. subcarpineae* Szatala

Gemlik; on the road to Katırlı village, 400 m, on *Quercus* sp., 40°22' N-29°12' E, 20.5.2001, (4253). İznik; on the road to Nushetiye village, oak woodland, 290 m, on *Quercus* sp., 40°23' N-29°45' E, 20.9.2000, (3619). In the vicinity of Süleymaniye, 500 m, on *Quercus* sp., 40°34' N-29°41' E, 11.3.2001, (4027). Mudanya; between Orhaniye and Çınarlı, agricultural field, 100 m, on *Ficus* sp., on *Platanus* sp., 40°18' N-28°47' E, 22.3.2001, (4105, 4112). Orhangazi; Yeniköy, agricultural field, 130 m, on *Platanus* sp., 40°31' N-29°25' E, 30.7.2000, (3170). Between Orhangazi and Hamzalı, 150 m, on *Tilia* sp., 40°30' N-29°18' E, 12.8.2000, (3434).

(+) *Lecidea fuscoatra* (L.) Ach.

Gemlik; between Hayriye and Narlı, around Selimiye, rocky field, 400 m, on siliceous rock, 40°30' N-29°00' E, 3.6.2001, (4225).

Lecidella carpathica Körb.

Loc. 3; 12; 28; 37; 42; 71; on siliceous rock, (4284, 4435, 3744, 4048, 3075, 3222). Loc. 80; on tile, (3407).

L. elaeochroma (Ach.) M.Choisy

Loc. 2; 4; 8; 13; 25; 37; 49; 51; 53; 69; on *Quercus* sp., (4243, 4312, 4358, 4481, 3702, 4029, 4129, 4173, 4202, 3190). Loc. 3; 22; 63; on *Salix* sp., (4269, 3661, 4541). Loc. 5; on *Pyrus elaeagnifolia*, on *Quercus* sp., (4331, 4322). Loc. 9; 10; on *Platanus* sp., (4388, 4393). Loc. 14; 20; 73; 79; on *Juglans* sp., (4486, 3649, 3248, 3365). Loc. 17; on *Juglans* sp., on *Quercus* sp., (3580, 3569). Loc. 19; on *Crataegus* sp., on *Quercus* sp., (3592, 3601). Loc. 23; 33; on *Pinus* sp., (3679, 3912). Loc. 27; on *Phillyrea* sp., (3717). Loc. 28; on *Cornus mas*, on *Ilex* sp., on *Pinus* sp., on *Quercus* sp., (3776, 3800, 3771, 3811). Loc. 29; on *Cornus mas*, on *Crataegus* sp., on *Quercus* sp., (3843, 3838, 3823). Loc. 32; on *Morus* sp., on *Prunus* sp., (3907, 3895). Loc. 34; on *Phillyrea* sp., on *Quercus* sp., (3946, 3932). Loc. 35; on *Olea* sp., on *Quercus* sp., (3993, 3957). Loc. 36; on *Crataegus* sp., on *Phillyrea* sp., on *Quercus* sp., (4017, 4023, 4001). Loc. 40; on *Juglans* sp., on *Olea* sp., (3062, 3065). Loc. 42; on *Pistacia* sp., on *Salix* sp., (3089, 3093). Loc. 45; 57; on *Amygdalus* sp., (3134, 4456). Loc. 46; on *Populus* sp., on *Quercus* sp., (3154, 3149). Loc. 47; on *Morus* sp., on *Prunus* sp., (4084, 4090). Loc. 48; on *Ficus* sp., on *Platanus* sp., (4104, 4110). Loc. 50; on *Pyrus elaeagnifolia*, (4149). Loc. 54; 56; 86; on *Ficus* sp., (4217, 4441, 3507). Loc. 59; on *Juglans* sp., on *Pistacia* sp., on *Prunus* sp., (4502, 4495, 4496). Loc. 68; on *Morus* sp., on *Prunus* sp., (4084, 4090). Loc. 70; on *Acacia* sp., on *Olea* sp., (3199, 3210). Loc. 75; on *Ficus* sp., on *Quercus* sp., (3298, 3286). Loc. 78; on *Mespilus* sp., on *Prunus* sp., on *Pyrus* sp., (3347, 3329, 3336). Loc. 80; on *Celtis* sp., (3395). Loc. 82; on *Tilia* sp., (3431). Loc. 83; on *Crataegus* sp., on *Pinus* sp., on *Prunus* sp., on *Quercus* sp., on *Tilia* sp., (3461, 3442, 3474, 3451, 3472). Loc. 85; on *Pyrus* sp., (3498).

L. stigmatea (Ach.) Hertel & Leuckert

Loc. 3; on siliceous rock, (4286). Loc. 83; on calcareous rock, (3467).

Lepraria incana (L.) Ach.

Loc. 23; 38; 41; 55; on *Pinus* sp., (3683, 4069, 3071, 4223). Loc. 28; on *Pinus* sp., on *Quercus* sp.,

(3773, 3809). Loc. 36; 49; 62; 83; on *Quercus* sp., (4011, 4128, 4531, 3455). Loc. 57; 73; on *Olea* sp., (4460, 3272).

(+) *L. lobificans* Nyl.

Gemlik; around Fevziye village, oak woodland, 390 m, on *Quercus* sp., on siliceous rock, 40°21' N-29°17' E, 20.5.2001, (4308). Karacaali, Şelale, 370 m, on siliceous rock, on siliceous soil, 40°29' N-29°04' E, 3.6.2001, (4418, 4411). İznik; on the road to Nushetiye village, oak woodland, 290 m, on *Quercus* sp., 40°23' N-29°45' E, 20.9.2000, (3620). In the vicinity of Şerefiye, 120-300 m, on *Pinus* sp., 40°24' N-29°46' E, 20.9.2000, (3635). Between Çiçekli and Çamoluk, 250 m, on *Pinus* sp., 40°24' N-29°48' E, 20.9.2000, (3682). Between İznik and İhsaniye, 3 km from İznik, rocky field, 250 m, on siliceous rock, 40°27' N-29°46' E, 15.10.2000, (3732). In the vicinity of Sağırağıl, oak woodland, 460 m, on *Quercus* sp., 40°33' N-29°40' E, 11.3.2001, (4006). In the vicinity of Mecidiye, 490 m, on *Pinus* sp., 40°35' N-29°42' E, 11.3.2001, (4070). Mudanya; Çepni village, 410 m, on siliceous soil, 40°20' N-28°51' E, 22.3.2001, (4198).

(+) *Leptogium corniculatum* (Hoffm.) Minks

Gemlik; between Adliye and Güvenli, 3 km from Adliye, 420 m, on moss, 40°23' N-29°13' E, 20.5.2001, (4346). İznik; in the vicinity of Mecidiye, 490 m, together with moss on siliceous soil, 40°35' N-29°42' E, 11.3.2001, (4059).

Lobothallia radiosa (Hoffm.) Hafellner

Loc. 2; 16; 20; 30; 31; 33; 35; 37; 79; on calcareous rock, (4262, 3557, 3624, 3858, 3872, 3921, 3979, 4042, 3375).

(+) *Melanelixia fuliginosa* (Duby) O.Blanco, A.Crespo, Divakar, Essl., D.Hawksw. & Lumbsch subsp. *glabratula* (Lamy)

Gemlik; around Fevziye village, oak woodland, 390 m, on *Quercus* sp., 40°21' N-29°17' E, 20.5.2001, (4307). İznik; between İznik and İhsaniye, 7 km from İznik, 650 m, on *Pinus* sp., 40°28' N-29°49' E, 15.10.2000, (3770). In the vicinity of Sansarak, oak woodland, 775 m, on *Quercus* sp., 40°28' N-29°50' E, 15.10.2000, (3847). In the vicinity of Mecidiye, 490 m, on *Pinus* sp., 40°35' N-29°42' E, 11.3.2001, (4066). Orhangazi; in the vicinity of Hamzalı, 290-350 m, on *Quercus* sp., 40°31' N-29°16' E, 12.8.2000, (3446).

Melanelixia glabra (Schaer.) O.Blanco, A.Crespo, Divakar, Essl., D.Hawksw. & Lumbsch

Loc. 5; on *Quercus* sp., (4318).

(+) **M. subargentifera** (Nyl.) O.Blanco, A.Crespo, Divakar, Essl., D.Hawksw. & Lumbsch

Mudanya; around Dereköy village, agricultural field, 240 m, on *Quercus* sp., 40°20' N-28°48' E, 22.3.2001, (4161).

M. subaurifera (Nyl.) O.Blanco, A.Crespo, Divakar, Essl., D.Hawksw. & Lumbsch

Loc. 2; 7; 8; 17; 25; 37; 49; 62; on *Quercus* sp., (4265, 4342, 4361, 3570, 2698, 4037, 4143, 4536). Loc. 4; on *Quercus* sp., on siliceous rock, (4306, 4300). Loc. 9; on *Erica* sp., (4373). Loc. 10; on *Platanus* sp., (4394). Loc. 19; on *Crataegus* sp., (3611). Loc. 23; on *Phillyrea* sp., on *Pinus* sp., (3670, 3676). Loc. 28; on *Ilex* sp., on *Phillyrea* sp., on *Pinus* sp., on *Quercus* sp., (3799, 3782, 3772, 3813). Loc. 29; on *Crataegus* sp., on *Quercus* sp., (3836, 3831). Loc. 34; on *Phillyrea* sp., (3947). Loc. 36; on *Phillyrea* sp., on *Quercus* sp., (4024, 4010). Loc. 38; on *Pinus* sp., (4067). Loc. 42; on *Pistacia* sp., (3090). Loc. 57; on *Amygdalus* sp., (4457). Loc. 70; on *Olea* sp., on *Quercus* sp., (3207, 3204). Loc. 75; on *Ficus* sp., on *Quercus* sp., (3299, 3291). Loc. 83; on *Crataegus* sp., on *Quercus* sp., (3464, 3448).

Melanohalea exasperata (De Not.) O.Blanco, A.Crespo, Divakar, Essl., D.Hawksw. & Lumbsch

Loc. 9; on *Platanus* sp., (4379). Loc. 28; 83; on *Quercus* sp., (3815, 3459). Loc. 53; on *Ficus* sp., (4195).

Nephroma laevigatum Ach.

Loc. 38; together with moss on siliceous soil, (4058).

Ochrolechia parella (L.) A.Massal

Loc. 11; on siliceous rock, (4427).

(*) **Opegrapha herbarum** Mont.

İznik; Göllüce village, 100-250 m, on *Olea* sp., 40°23' N-29°36' E, 2.9.2000, (3560). Mudanya; between Mudanya and Mirzeoba, olive grove, 250 m, on *Pistacia* sp., 40°22' N-28°47' E, 27.7.2000, (3102). Hançerli village, around Hançerli Baba Tomb, oak woodland, 200 m, on *Quercus* sp., 40°19' N-28°44' E, 20.7.2001, (4555). Orhangazi; in the vicinity of Karsak, 70-150 m, on *Juglans* sp., 40°24' N-29°15' E, 5.8.2000, (3253).

Yenisölöz village, olive grove, 280 m, on *Mespilus* sp., 40°23' N-29°23' E, 5.8.2000, (3348). In the vicinity of Hamzalı, 290-350 m, on *Quercus* sp., 40°31' N-29°16' E, 12.8.2000, (3453).

(+) **O. varia** Pers.

Mudanya; between Orhaniye and Çınarlı, agricultural field, 100 m, on *Populus* sp., 40°18' N-28°47' E, 22.3.2001, (4097). Around Dereköy village, agricultural field, 240 m, on *Quercus* sp., 40°20' N-28°48' E, 22.3.2001, (4163). Between Zeytinbağı and Esence, 5 km from Zeytinbağı, agricultural field, 80 m, on *Populus* sp., 40°22' N-28°45' E, 20.7.2001, (4492). Esence village, around TRT Transmitter, open field, 30 m, on *Quercus* sp., 40°21' N-28°42' E, 20.7.2001, (4527). Orhangazi; Gölyaka village, 80 m, on *Quercus* sp., 40°25' N-29°22' E, 5.8.2000, (3312). In the vicinity of Hamzalı, 290-350 m, on *Pinus* sp., 40°31' N-29°16' E, 12.8.2000, (3441).

Parmelia saxatilis (L.) Ach.

Loc. 28; on siliceous rock, (3757).

P. sulcata Taylor

Loc. 2; 5; 7; 17; 19; 29; 37; 46; 49; 51; 62; on *Quercus* sp., (4251, 4336, 4347, 3570, 3595, 3846, 4032, 3151, 4122, 4172, 4534). Loc. 4; on *Quercus* sp., on siliceous rock, (4309, 4299). Loc. 9; on *Olea* sp., on *Erica* sp., on *Platanus* sp., (4368, 4377, 4392). Loc. 10; on log, on *Platanus* sp., (4405, 4422). Loc. 23; on *Phillyrea* sp., (3669). Loc. 28; on *Ilex* sp., on *Pinus* sp., on *Quercus* sp., on rock, (3798, 3768, 3805, 3820). Loc. 35; on *Olea* sp., (3951). Loc. 36; on *Phillyrea* sp., on *Quercus* sp., (4022, 4026). Loc. 38; on *Pinus* sp., (4063). Loc. 42; on *Pistacia* sp., (3091). Loc. 48; on *Platanus* sp., (4109). Loc. 75; on *Ficus* sp., (3296). Loc. 83; on *Crataegus* sp., on *Quercus* sp., (3463, 3449). Loc. 85; on *Pyrus* sp., (3495).

Parmelina pastillifera (Harm.) Hale

Loc. 3; on siliceous rock, (4279).

P. quercina (Willd.) Vain.

Loc. 2; 5; 7; 25; 37; 46; 49; 62; 83; on *Quercus* sp., (4264, 4317, 4348, 3701, 4030, 3150, 4125, 4535, 3458). Loc. 9; 10; on *Platanus* sp., (4387, 4396). Loc. 19; on *Crataegus* sp., (3610). Loc. 36; on *Crataegus* sp., on *Quercus* sp., (4014, 4025). Loc. 42; on *Pistacia* sp., (3087). Loc. 53; 56; on *Ficus* sp., (4193, 4454).

Parmelina tiliacea (Hoffm.) Ach.

Loc. 3; on siliceous rock, (4280). Loc. 9; on *Olea* sp., (4372). Loc. 9; on *Erica* sp., on *Platanus* sp., (4380, 4378). Loc. 10; on rock, on *Olea* sp., (4408, 4395). Loc. 37; 67; on *Quercus* sp., (4050, 4560). Loc. 50; on *Pyrus elaeagnifolia*, (4145). Loc. 70; on *Olea* sp., on *Quercus* sp., (3211, 3206).

Parmotrema perlatum (Huds.) M.Choisy

Loc. 17; on *Quercus* sp., (3573).

(+) **Peltigera collina** (Ach.) Schrad.

Orhangazi; in the vicinity of Hamzalı, 290-350 m, at the base of *Quercus* sp, 40°31' N-29°16' E, 12.8.2000, (3444).

P. horizontalis (Huds.) Baumg.

Loc. 4; 38; together with moss on soil, (4313, 4056).

P. polydactylon (Neck.) Hoffm.

Loc. 4; 38; on siliceous soil, (4315, 4057). Loc. 28; on siliceous rock, (3819). Loc. 29; together with moss on rock, (3841).

P. praetextata (Flörke ex Sommerf.) Zopf

Loc. 4; 38; 53; on siliceous soil, (4314, 4054, 4199). Loc. 9; on *Platanus* sp., (4389). Loc. 28; 83; at the base of *Quercus* sp., (3817, 3445).

P. rufescens (Weiss) Humb.

Loc. 12; on soil, (4437). Loc. 27; 28; on siliceous rock, (3714, 3818). Loc. 29; on calcareous soil, (3842). Loc. 38; together with moss on siliceous soil, (4055).

Pertusaria albescens (Huds.) M.Choisy & Werner

Loc. 4; 67; 83; on *Quercus* sp., (4310, 4555, 3454). Loc. 37; on siliceous rock, (4047). Loc. 68; on *Morus* sp., (3163). Loc. 87; on *Populus* sp., (3525).

P. amara (Ach.) Nyl.

Loc. 3; 28; on siliceous rock, (4278, 3754). Loc. 9; *Olea* sp., (4366). Loc. 36; on log, (4020).

(+) **P. leucosora** Nyl.

Gemlik; between Hayriye and Narlı, around Selimiye, rocky field, 400 m, on siliceous rock, 40°30' N-29°00' E, 3.6.2001, (4430).

Phaeophyscia orbicularis (Neck.) Moberg

Loc. 1; on *Populus* sp., on *Prunus* sp., (4229, 4234). Loc. 2; on *Pyrus* sp., (4249). Loc. 5; 13; 19; 37; 66; 75;

on *Quercus* sp., (4328, 4475, 3598, 4034, 4553, 3284). Loc. 14; on *Juglans* sp., on *Salix* sp., (4487, 4489). Loc. 18; 21; 56; 78; 81; on *Populus* sp., (3583, 3655, 4447, 3321, 3414). Loc. 20; on calcareous rock, on *Populus* sp., (3625, 3644). Loc. 22; on *Populus* sp., on *Salix* sp., (3660, 3666). Loc. 24; on *Platanus* sp., on *Salix* sp., (3688, 3694). Loc. 26; on *Platanus* sp., (3708). Loc. 31; on calcareous rock, (3882). Loc. 32; 47; 52; on *Morus* sp., (3901, 4085, 4177). Loc. 45; on *Amygdalus* sp., (3138). Loc. 48; on *Platanus* sp., on *Populus* sp., (4111, 4122). Loc. 50; on *Pyrus elaeagnifolia*, on siliceous rock, (4147, 4153). Loc. 54; on *Ficus* sp., on *Populus* sp., (4212, 4209). Loc. 68; on *Platanus* sp., on *Salix* sp., (3167, 3181). Loc. 69; on *Ficus* sp., (3193). Loc. 72; 77; on *Juglans* sp., (3230, 3315). Loc. 73; on *Populus* sp., on *Quercus* sp., (3256, 3240). Loc. 79; on *Ficus* sp., on *Juglans* sp., on *Populus* sp., (3358, 3362, 3353). Loc. 82; on *Tilia* sp., (3429). Loc. 85; on *Pyrus* sp., on *Quercus* sp., (3499, 3491). Loc. 87; on *Celtis* sp., (3513).

(+) **Phlyctis argena** (Spreng.) Flot.

İznik; between İznik and İhsaniye, 7 km from İznik, 650 m, on *Phillyrea* sp., 40°28' N-29°49' E, 15.10.2000, (3792). In the vicinity of Sansarak, oak woodland, 775 m, on *Crataegus* sp., 40°28' N-29°50' E, 15.10.2000, (3840).

Physcia adscendens (Th.Fr.) H.Olivier

Loc. 1; 54; 56; 73; 81; 88; on *Populus* sp., (4224, 4222, 4448, 3257, 3413, 3532). Loc. 2; 5; 19; 25; 36; 51; 53; 61; 62; 69; 70; 82; on *Quercus* sp., (4242, 4325, 3604, 3696, 4008, 4162, 4201, 4530, 4531, 3189, 3201, 3424). Loc. 3; 24; 42; 63; on *Salix* sp., (4266, 3690, 3094, 4538). Loc. 9; 10; on *Platanus* sp., (4374, 4401). Loc. 17; on *Populus* sp., on *Quercus* sp., (3564, 3568). Loc. 20; on *Pinus* sp., on *Populus* sp., (3634, 3642). Loc. 21; 33; 55; on *Pinus* sp., (3656, 3911, 4219). Loc. 23; on *Phillyrea* sp., on *Pinus* sp., (3668, 3675). Loc. 28; on *Cornus mas*, on *Ilex* sp., (3779, 3794). Loc. 29; on *Cornus mas*, on *Crataegus* sp., on *Quercus* sp., (3844, 3837, 3829). Loc. 30; 58; on calcareous rock, (3869, 4470). Loc. 34; on *Phillyrea* sp., on *Quercus* sp., (3943, 3937). Loc. 35; on *Olea* sp., (3954). Loc. 37; on *Quercus* sp., on siliceous rock, (4035, 4044). Loc. 43; on tile, (3118). Loc. 46; on *Populus* sp., on *Quercus* sp., (3160, 3143). Loc. 47; on *Morus* sp., on *Populus* sp., (4082, 4049). Loc. 48; on

Ficus sp., on *Platanus* sp., (4099, 4107). Loc. 49; on *Juglans* sp., on *Quercus* sp., (4138, 4130). Loc. 50; on *Pyrus elaeagnifolia*, (4159). Loc. 59; on *Juglans* sp., on *Populus* sp., (4505, 4507). Loc. 68; on *Platanus* sp., on *Salix* sp., (3164, 3184). Loc. 71; on siliceous rock, (3214). Loc. 75; on *Ficus* sp., on *Quercus* sp., (3295, 3282). Loc. 76; on *Morus* sp., (3314). Loc. 78; on *Populus* sp., on *Pyrus* sp., (3323, 3334). Loc. 83; on calcareous rock, on *Pinus* sp., (3468, 3438). Loc. 87; on *Celtis* sp., on *Platanus* sp., on *Populus* sp., (3519, 3528, 3520).

Physcia aipolia (Ehrh. ex Humb.) Fűrnr.

Loc. 1; 18; 54; 56; 78; 88; on *Populus* sp., (4239, 3582, 4220, 4446, 3322, 3531). Loc. 2; on *Pyrus* sp., (4250). Loc. 3; 63; 76; on *Salix* sp., (4298, 4540, 3308). Loc. 6; on *Cupressus* sp., (4340). Loc. 13; 25; 37; 61; 66; 74; 75; 85; on *Quercus* sp., (4482, 3700, 4036, 4525, 4552, 3274, 3283, 3501). Loc. 19; on *Crataegus* sp., on *Quercus* sp., (3609, 3608). Loc. 20; 51; on *Juglans* sp., (3646, 4167). Loc. 32; 52; on *Morus* sp., (3900, 4189). Loc. 35; on *Olea* sp., (3951). Loc. 36; on *Crataegus* sp., on *Quercus* sp., (4019, 4005). Loc. 45; on *Amygdalus* sp., (3133). Loc. 46; on *Populus* sp., on *Quercus* sp., (3155, 3142). Loc. 47; on *Morus* sp., on *Prunus* sp., (4083, 4088). Loc. 48; on *Ficus* sp., on *Platanus* sp., (4100, 4108). Loc. 50; on *Pyrus elaeagnifolia*, (4160). Loc. 68; on *Platanus* sp., on *Salix* sp., (3166, 3183). Loc. 69; on *Ficus* sp., on *Quercus* sp., (3194, 3187). Loc. 70; on *Acacia* sp., on *Quercus* sp., (3198, 3202). Loc. 73; on *Juglans* sp., on *Populus* sp., on *Quercus* sp., (3252, 3254, 3243). Loc. 79; on *Ficus* sp., on *Juglans* sp., on *Populus* sp., on *Prunus* sp., (3357, 3360, 3352, 3367). Loc. 80; on *Cupressus* sp., on *Morus* sp., (3390, 3388). Loc. 81; on *Populus* sp., on *Quercus* sp., (3411, 3418). Loc. 82; on *Tilia* sp., (3430). Loc. 83; on *Pinus* sp., (3439). Loc. 87; on *Celtis* sp., on *Populus* sp., (3530, 3521).

Ph. caesia (Hoffm.) Fűrnr.

Loc. 3; 28; 42; on siliceous rock, (4275, 3760, 3072). Loc. 31; on calcareous rock, (3889).

Ph. semipinnata (J.F.Gmel.) Moberg

Loc. 10; on *Platanus* sp., (4402). Loc. 19; on *Crataegus* sp., on *Quercus* sp., (3587, 3618). Loc. 23; on *Pinus* sp., (3678). Loc. 27; on *Phillyrea* sp., (3718). Loc. 28; on *Ilex* sp., (3795). Loc. 29; on *Crataegus* sp., on *Quercus* sp., (3834, 3830). Loc. 34; on *Phillyrea* sp., on

Quercus sp., (3940, 3935). Loc. 36; on *Crataegus* sp., (4015). Loc. 37; 49; on *Quercus* sp., (4028, 4127). Loc. 43; on tile, (3124).

Ph. stellaris (L.) Nyl.

Loc. 32; on *Morus* sp., (3906). Loc. 81; on *Populus* sp., (3412).

Physconia distorta (With.) J.R.Laundon

Loc. 2; on *Pyrus* sp., (4247). Loc. 19; 37; on *Quercus* sp., (3594, 4033).

Phy. enteroxantha (Nyl.) Poelt

Loc. 2; 19; 36; 46; 70; on *Quercus* sp., (4241, 3597, 4003, 3144, 3203). Loc. 3; on *Salix* sp., (4297). Loc. 5; on *Pyrus elaeagnifolia*, on *Quercus* sp., (4330, 4319). Loc. 85; on *Pyrus* sp., on *Quercus* sp., (3496, 3494).

Phy. grisea (Lam.) Poelt

Loc. 19; 66; 67; 75; 80; on *Quercus* sp., (3603, 4554, 4561, 3292, 3386). Loc. 50; on *Pyrus elaeagnifolia*, (4146). Loc. 70; on *Olea* sp., (3209). Loc. 87; on *Celtis* sp., (3516).

Phy. perisidiosa (Erichsen) Moberg

Loc. 3; on *Salix* sp., (4272). Loc. 4; on siliceous rock, (4302). Loc. 19; 36; on *Quercus* sp., (3599, 3995).

Placidium rufescens (Ach.) A.Massal.

Loc. 30; 79; on calcareous rock, (3863, 3374).

(+) Placocarpus schaeereri (Fr.) Breuss

İznik; between İznik and Elbeyli, rocky field, 130 m, on calcareous rock, 40°28' N-29°44' E, 11.2.2001, (3868).

Placynthium nigrum (Huds.) Gray

Loc. 30; 33; 35; 60; 79; on calcareous rock, (3857, 3922, 3988, 4521, 3372).

Pleurosticta acetabulum (Neck.) Elix & Lumbsch

Loc. 5; 19; 29; 36; 37; 46; 49; 51; 74; 85; on *Quercus* sp., (4316, 3602, 3825, 3994, 4031, 3174, 4124, 4171, 3276, 3490). Loc. 14; on *Juglans* sp., (4490). Loc. 28; on *Ilex* sp., on *Phillyrea* sp., (3793, 3781). Loc. 32; on *Prunus* sp., (3909). Loc. 56; on *Ficus* sp., (4453). Loc. 57; on *Amygdalus* sp., (4463).

Porpidia crustulata (Ach.) Hertel & Knoph

Loc. 53; on siliceous rock, (4200). Loc. 73; on tile, (3270).

(+) Protoblastenia rupestris (Scop.) J.Steiner

Orhangazi; between Orhangazi and Fındıklı, vicinity of lime pit, 280 m, on calcareous rock, 40°29' N-29°18' E, 12.8.2000, (3483).

(+) Protopannaria pezizoides (Weber ex F.H.Wigg.) P.M.Jørg. & S.Ekman

İznik; in the vicinity of Mecidiye, 490 m, on siliceous soil, 40°35' N-29°42' E, 11.3.2001, (4072).

Protoparmelia badia (Hoffm.) Hafellner

Loc. 16; on tile, (3552). Loc. 31; on calcareous rock, (3879).

Protoparmeliopsis muralis (Schreb.) M.Choisy

Loc. 2; 20; 30; 31; 50; 58; on calcareous rock, (4257, 3653, 3850, 3892, 4155, 4468). Loc. 3; 4; 10; 11; 16; 28; 37; 42; 48; 60; 71; on siliceous rock, (4276, 4304, 4419, 4432, 3553, 3745, 4043, 3079, 4113, 4522, 3213). Loc. 35; on calcareous rock, on siliceous rock, (3984, 3972). Loc. 43; 80; on tile, (3123, 3403). Loc. 72; on tile, on siliceous rock, (3234, 3229). Loc. 73; on tile, on siliceous rock, (3266, 3264).

Pseudevernia furfuracea (L.) Zopf var. *ceratea* (Ach.) D.Hawksw.

Loc. 28; together with moss on siliceous rock, (3762).

Ps. furfuracea (L.) Zopf var. *furfuracea*

Loc. 5; 33; 38; on *Pinus* sp., (4334, 3930, 4060). Loc. 9; on *Erica* sp., (4385). Loc. 28; on siliceous rock, (3816). Loc. 36; on *Quercus* sp., (4004).

Psora decipiens (Hedw.) Hoffm.

Loc. 35; on calcareous soil, (3964).

Ramalina farinacea (L.) Ach.

Loc. 10; on *Platanus* sp., (4397). Loc. 17; on *Quercus* sp., (3576). Loc. 19; on *Crataegus* sp., on *Quercus* sp., (3589, 3607). Loc. 23; on *Phillyrea* sp., on *Pinus* sp., (3671, 3677). Loc. 28; on *Ilex* sp., on *Quercus* sp., (3797, 3806). Loc. 29; on *Crataegus* sp., on *Quercus* sp., (3839, 3827). Loc. 36; on *Crataegus* sp., on *Quercus* sp., (4016, 3996). Loc. 52; on *Pyrus elaeagnifolia*, (4182).

R. fastigiata (Pers.) Ach.

Loc. 36; 46; 49; 62; on *Quercus* sp., (3998, 3158, 4126, 4533). Loc. 63; on *Salix* sp., (4537).

R. fraxinea (L.) Ach.

Loc. 19; 36; on *Quercus* sp., (3606, 3997).

(+) R. thrausta (Ach.) Nyl.

İznik; between İznik and İhsaniye, 7 km from İznik, 650 m, on *Phillyrea* sp., 40°28' N-29°49' E, 15.10.2000, (3784).

Rhizocarpon distinctum Th.Fr.

Loc. 11; 28; 42; on siliceous rock, (4429, 3741, 3074).

(+) Rh. geminatum Körb.

Gemlik; between Hamidiye and Şükriye, rocky field, 350 m, on siliceous rock, 40°21' N-29°16' E, 20.5.2001, (4291).

Rh. geographicum (L.) DC.

Loc. 3; 10; 11; 20; 27; 28; 35; on siliceous rock, (4295, 4414, 4426, 3626, 3729, 3742, 3977).

(+) Rh. lecanorinum Anders

İznik; between İznik and İhsaniye, 7 km from İznik, 650 m, on siliceous rock, 40°28' N-29°49' E, 15.10.2000, (3749).

Rh. petraeum (Wulfen) A.Massal.

Loc. 3; on siliceous rock, (4290).

(+) Rinodina bischoffii (Hepp) A.Massal.

İznik; between İznik and İhsaniye, 3 km from İznik, rocky field, 250 m, on calcareous rock, 40°27' N-29°46' E, 15.10.2000, (3725). Between Elbeyli and Ömerli, 300 m, on calcareous rock, 40°30' N-29°43' E, 11.2.2001, (3884). Between İnikli and Gürmüzlü, *Pinus* sp. forest, 350 m, on calcareous rock, 40°31' N-29°45' E, 11.2.2001, (3923).

(+) R. calcarea (Arnold) Arnold

İznik; between Elbeyli and Ömerli, 300 m, on calcareous rock, 40°30' N-29°43' E, 11.2.2001, (3891). Mudanya; Zeytinbağı village, 10 m, on calcareous rock, on tile, 40°24' N-28°48' E, 27.7.2000, (3105, 3127). Orhangazi; Örnekköy, 80 m, on tile, 40°38' N-29°20' E, 12.8.2000, (3419).

R. exigua (Ach.) Gray

Loc. 2; 25; 35; 75; on *Quercus* sp., (4255, 3703, 3959, 3290). Loc. 16; on *Olea* sp., (3561). Loc. 19; on *Crataegus* sp., (3623). Loc. 20; on *Prunus* sp., (3637).

Loc. 23; on *Phillyrea* sp., on *Pinus* sp., (3672, 3680).
 Loc. 34; on *Phillyrea* sp., on *Quercus* sp., (3942, 3936).
 Loc. 45; on *Amygdalus* sp., (3139). Loc. 68; on *Platanus*
 sp., on *Salix* sp., (3174, 3177). Loc. 79; on *Platanus* sp.,
 (3371).

(+) *Rinodina immersa* (Körb.) Arnold

Mudanya; between Orhaniye and Çınarlı, agricultural
 field, 100 m, on calcareous rock, 40°18' N-28°47' E,
 22.3.2001, (4120).

(+) *R. interpolata* (Stirt.) Sheard

Orhangazi; Mahmudiye village, 560 m, on siliceous
 rock, 40°32' N-29°28' E, 30.7.2000, (3226).

(+) *R. sophodes* (Ach.) A.Massal.

Gemlik; between Büyükkumla and Haydariye, Ayvalık,
 200-400 m, on *Platanus* sp., 40°29' N-29°06' E,
 3.6.2001, (4384). İznik; between İznik and İhsaniye, 1
 km from İznik, 110 m, on *Platanus* sp., 40°26' N-29°44'
 E, 15.10.2000, (3707). Between İznik and İhsaniye, 7
 km from İznik, 650 m, on *Quercus* sp., 40°28' N-29°49'
 E, 15.10.2000, (3814). In the vicinity of Sansarak, oak
 woodland, 775 m, on *Quercus* sp., 40°28' N-29°50' E,
 15.10.2000, (3828). Between Ömerli and Tacir, 400 m,
 on *Prunus* sp., 40°31' N-29°44' E, 11.2.2001, (3897).
 Mudanya; between Mudanya and Mirzeoba, olive grove,
 250 m, on *Pistacia* sp., 40° 22' N-28° 47' E, 27.7.2000,
 (3086). Orhangazi; in the vicinity of Cihanköy, 220-280
 m, on *Quercus* sp., 40°32' N-29°20' E, 30.7.2000,
 (3191). Gemiç village, 100 m, on *Cupressus* sp., 40°24'
 N-29°16' E, 5.8.2000, (3279). Gölyaka village, 80 m, on
Salix sp., 40°25' N-29°22' E, 5.8.2000, (3310).
 Yenisölöz village, olive grove, 280 m, on *Prunus* sp.,
 40°23' N-29°23' E, 5.8.2000, (3330). Between
 Orhangazi and Hamzalı, on *Quercus* sp., 150 m, 40°30'
 N-29°18' E, 12.8.2000, (3425). In the vicinity of
 Hamzalı, 290-350 m, on *Quercus* sp., 40°31' N-29°16'
 E, 12.8.2000, (3457). Sölöz village, 200 m, on *Morus*
 sp., 40°24' N-29°25' E, 2.9.2000, (3505).

Sarcogyne privigna (Ach.) A.Massal.

Loc. 35; on siliceous rock, (3991).

S. regularis Körb.

Loc. 27; on calcareous rock, on siliceous rock, (3726,
 3733). Loc. 35; 48; 58; 60; 65; 84; on calcareous rock,
 (3985, 4116, 4474, 4516, 4547, 3487).

Schaereria fuscocinerea (Nyl.) Clauz. & Cl.Roux

Loc. 28; on siliceous rock, (3755).

Scoliosporum umbrinum (Ach.) Arnold

Loc. 83; on *Pinus* sp., (3443).

Squamarina cartilaginea (With.) P.James var.
cartilaginea

Loc. 15; 30; on calcareous rock, (3544, 3870). Loc.
 35; on calcareous soil, (3966).

S. cartilaginea (With.) P.James var. *pseudocrassa*
 (Mattick) D.Hawksw.

Loc. 30; 31; on calcareous rock, (3849, 3888).

(+) *S. lentigera* (Weber) Poelt

İznik; between Orhaniye and Sağırağıl, 3 km from
 Orhaniye, 280-360 m, on calcareous soil, 40°31' N-
 29°40' E, 11.3.2001, (3965).

(+) *Staurothele frustulenta* Vain.

Orhangazi; Mahmudiye village, on tile, 560 m, 40°32'
 N-29°28' E, 30.7.2000, (3236).

Tephromela atra (Huds.) Hafellner

Loc. 9; 40; on *Olea* sp., (4370, 3067). Loc. 35; on
 siliceous rock, (3989). Loc. 42; on *Pistacia* sp., (3085).
 Loc. 43; on tile, (3122). Loc. 57; on *Amygdalus* sp.,
 (4462).

(+) *Toninia candida* (Weber) Th.Fr.

İznik; in the vicinity of Demirişik, rocky area, 80 m,
 on calcareous rock, 40°23' N-29°34' E, 2.9.2000,
 (3547). Orhangazi; Gedelek village, rocky area, 150 m,
 on calcareous rock, 40°24' N-29°25' E, 12.8.2000,
 (3377).

T. sedifolia (Scop.) Timdal

Loc. 8; 30; 31; on calcareous rock, (4350, 3848,
 3886). Loc. 27; 35; on calcareous soil, (3715, 3967).

(+) *Umbilicaria grisea* Hoffm.

İznik; between İznik and İhsaniye, 7 km from İznik,
 650 m, on siliceous rock, 40°28' N-29°49' E,
 15.10.2000, (3821).

(+) *U. hirsuta* (Swartz ex Westr.) Hoffm.

İznik; between İznik and İhsaniye, 7 km from İznik,
 650 m, on siliceous rock, 40°28' N-29°49' E,
 15.10.2000, (3761).

(+) *Verrucaria lecideoides* (A.Massal.) Trevis.

İznik; between İznik and Elbeyli, rocky field, 130 m, on calcareous rock, 40°28' N-29°44' E, 11.2.2001, (3861). Orhangazi; Gedelek village, rocky area, 150 m, on calcareous rock, 40°24' N-29°25' E, 12.8.2000, (3380).

(+) *V. macrostoma* Dufour ex DC.

Mudanya; Zeytinbağı village, 10 m, on tile, 40°24' N-28°48' E, 27.7.2000, (3125). Orhangazi; Örnekköy, 80 m, on tile, 40°38' N-29°20' E, 12.8.2000, (3421).

(+) *V. muralis* Ach.

İznik; between İznik and İhsaniye, 3 km from İznik, rocky field, 250 m, on siliceous rock, 40°27' N-29°46' E, 15.10.2000, (3735). Between Orhaniye and Sağırağıl, 3 km from Orhaniye, 280-360 m, on calcareous rock, 40°31' N-29°40' E, 11.3.2001, (3986). Mudanya; between Altıntaş and Kurşunlu, exit of Altıntaş, rocky slopes, 10 m, on calcareous rock, 40°21' N-28°59' E, 30.6.2001, (4465). Between Zeytinbağı and Ayani, rocky field, 60 m, on calcareous rock, 40°23' N-28°44' E, 20.7.2001, (4513). Çayönü village, 60 m, on tile, 40°18' N-28°40' E, 20.7.2001, (4545). Around Yörükyenicesi village, rocky field, 90 m, on calcareous rock, 40°17' N-28°42' E, 20.7.2001, (4548). Orhangazi; between Üreğil and Mahmudiye, rocky field, 420 m, on calcareous rock, 40°32' N-29°25' E, 30.7.2000, (3218). Gedelek village, rocky area, 150 m, on calcareous rock, 40°24' N-29°25' E, 12.8.2000, (3379). Çeltikçi village, 90-150 m, on graveyard wall, 40°28' N-29°17' E, 12.8.2000, (3402).

(+) *V. nigrescens* Pers.

Gemlik; between Hamidiye and Şükriye, rocky field, 350 m, on siliceous rock, 40°21' N-29°16' E, 20.5.2001, (4288). Şahintepe, 650 m, maquis field, on calcareous rock, 40°28' N-29°13' E, 3.6.2001, (4351). İznik; in the vicinity of Demirşık, rocky area, 80 m, on calcareous rock, 40°23' N-29°34' E, 2.9.2000, (3540). Göllüce village, 100-250 m, on tile, 40°23' N-29°36' E, 2.9.2000, (3549). Between İznik and İhsaniye, 3 km from İznik, rocky field, 250 m, on calcareous rock, 40°27' N-29°46' E, 15.10.2000, (3734). Between İznik and Elbeyli, rocky field, 130 m, on calcareous rock, 40°28' N-29°44' E, 11.2.2001, (3854). Between Elbeyli and Ömerli, 300 m, on calcareous rock, 40°30' N-29°43' E, 11.2.2001, (3883). Between İnikli and Gürmüzlü,

Pinus sp. forest, 350 m, on calcareous rock, 40°31' N-29°45' E, 11.2.2001, (3919). Between Orhaniye and Sağırağıl, 3 km from Orhaniye, 280-360 m, on calcareous rock, 40°31' N-29°40' E, 11.3.2001, (3970). In the vicinity of Süleymaniye, 500 m, on siliceous rock, 40°34' N-29°41' E, 11.3.2001, (4046). Mudanya; between Orhaniye and Çınarlı, agricultural field, 100 m, siliceous rock with calcareous, 40°18' N-28°47' E, 22.3.2001, (4118). Between Altıntaş and Kurşunlu, exit of Altıntaş, rocky slopes, 10 m, on calcareous rock, 40°21' N-28°59' E, 30.6.2001, (4464). Between Zeytinbağı and Ayani, rocky field, 60 m, on calcareous rock, 40°23' N-28°44' E, 20.7.2001, (4518). Orhangazi; Mahmudiye village, on tile, 560 m, 40°32' N-29°28' E, 30.7.2000, (3238). In the vicinity of Karsak, on siliceous rock, 70-150 m, 40°24' N-29°15' E, 5.8.2000, (3269). Gedelek village, rocky area, 150 m, on calcareous rock, 40°24' N-29°25' E, 12.8.2000, (3382). Çeltikçi village, 90-150 m, on tile, 40°28' N-29°17' E, 12.8.2000, (3404). In the vicinity of Hamzalı, 290-350 m, on calcareous rock, 40°31' N-29°16' E, 12.8.2000, (3466). Between Orhangazi and Findıklı, vicinity of lime pit, 280 m, on calcareous rock, 40°29' N-29°18' E, 12.8.2000, (3479).

Xanthoparmelia conspersa (Ehrh. ex Ach.) Hale

Loc. 28; 35; 37; 42; 60; on siliceous rock, (3752, 3975, 4040, 3078, 4523).

(+) *X. mougeotii* (Schaer. ex D.Dietr.) Hale

İznik; between İznik and İhsaniye, 7 km from İznik, 650 m, on siliceous rock, 40°28' N-29°49' E, 15.10.2000, (3747).

X. pulla (Ach.) O.Blanco, A.Crespo, Elix, D.Hawksw. & Lumbsch

Loc. 8; 10; 11; 12; 27; 28; 35; 37; 42; 60; on siliceous rock, (4349, 4415, 4423, 4433, 3719, 3748, 3978, 4041, 3076, 4524). Loc. 31; on calcareous rock, (3893).

X. somloënsis (Gyeln.) Hale

Loc. 3; 28; 50; on siliceous rock, (4274, 3750, 4150).

X. tinctina (Maheu & Gillet) Hale

Loc. 3; 12; 28; on siliceous rock, (4273, 4436, 3751).

Xanthoparmelia verruculifera (Nyl.) O. Blanco, A. Crespo, Elix, D. Hawksw. & Lumbsch

Loc. 3; 10; 27; on siliceous rock, (4289, 4416, 3731). Loc. 20; on calcareous rock, (3630).

Xanthoria calcicola Oxner

Loc. 31; 60; on calcareous rock, (3885, 4511). Loc. 43; on tile, (3114).

X. parietina (L.) Th. Fr.

Loc. 1; on *Populus* sp., on *Prunus* sp., (4238, 4230). Loc. 2; on *Pyrus* sp., (4246). Loc. 3; 63; on *Salix* sp., (4296, 4539). Loc. 5; 25; 37; 61; 75; on *Quercus* sp., (4324, 3704, 4051, 4528, 3281). Loc. 6; on *Cupressus* sp., (4339). Loc. 9; on *Platanus* sp., (4376). Loc. 10; 51; 72; 77; on *Juglans* sp., (4400, 4164, 3231, 3319). Loc. 14; on *Juglans* sp., on *Salix* sp., (4485, 4488). Loc. 17; on *Juglans* sp., on *Populus* sp., on *Quercus* sp., (3577, 3581, 3567). Loc. 18; 22; 88; on *Populus* sp., (3586, 3667, 3539). Loc. 21; on *Prunus* sp., (3654). Loc. 24; on *Juglans* sp., on *Platanus* sp., on *Salix* sp., (3695, 3687, 3689). Loc. 28; on *Phillyrea* sp., (3788). Loc. 29; on *Crataegus* sp., (3833). Loc. 32; on *Morus* sp., on *Prunus* sp., (3899, 3908). Loc. 34; on *Phillyrea* sp., on *Quercus* sp., (3944, 3949). Loc. 36; on *Crataegus* sp., on *Quercus* sp., (4013, 4009). Loc. 39; on graveyard wall, (3058). Loc. 42; on *Pistacia* sp., on *Populus* sp., (3097, 3096). Loc. 43; on calcareous rock, on tile, (3113, 3115). Loc. 45; on *Amygdalus* sp., on *Juglans* sp., (3131, 3130). Loc. 46; on *Populus* sp., on *Quercus* sp., (3159, 3152). Loc. 47; on *Morus* sp., on *Populus* sp., on *Prunus* sp., (4080, 4078, 4089). Loc. 48; on *Ficus* sp., on *Platanus* sp., on *Populus* sp., (4098, 4106, 4121). Loc. 49; on *Juglans* sp., on *Quercus* sp., (4136, 4131). Loc. 50; on *Pyrus elaeagnifolia*, on siliceous rock, (4158, 4151). Loc. 52; on *Morus* sp., on *Olea* sp., on *Pyrus elaeagnifolia*, (4188, 4180, 4181). Loc. 53; on *Ficus* sp., on *Quercus* sp., (4194, 4203). Loc. 54; on *Ficus* sp., on *Populus* sp., (4211, 4218). Loc. 56; on *Olea* sp., on *Populus* sp., (4452, 4444). Loc. 57; on *Amygdalus* sp., (4461). Loc. 59; on *Pistacia* sp., on *Populus* sp., on *Pyrus* sp., (4494, 4506, 4498). Loc. 68; on *Platanus* sp., on *Salix* sp., (3165, 3182). Loc. 69; on *Ficus* sp., on *Quercus* sp., (3192, 3186). Loc. 70; on *Acacia* sp., on *Olea* sp., on *Quercus* sp., (3197, 3212, 3205). Loc. 73; on *Juglans* sp., on *Populus* sp., on *Quercus* sp., (3249, 3271, 3242). Loc. 74; on *Cupressus* sp., on *Quercus* sp., (3277, 3273). Loc. 76; *Morus* sp., (3313). Loc. 78; on *Populus*

sp., on *Pyrus* sp., on *Prunus* sp., (3320, 3335, 3328). Loc. 79; on *Ficus* sp., on *Juglans* sp., on *Populus* sp., on *Punica* sp., (3356, 3359, 3351, 3349). Loc. 80; on *Cupressus* sp., on *Morus* sp., on *Quercus* sp., (3393, 3387, 3385). Loc. 81; on *Populus* sp., on *Quercus* sp., (3410, 3417). Loc. 82; on *Acer* sp., on *Quercus* sp., on *Tilia* sp., (3427, 3422, 3428). Loc. 83; on *Crataegus* sp., on *Pinus* sp., (3460, 3437). Loc. 85; on *Pyrus* sp., on *Quercus* sp., (3497, 3492). Loc. 87; on *Celtis* sp., on *Populus* sp., (3515, 3522).

Discussion

In this study, *Caloplaca atroflava*, *Eopyrenula leucoplaca*, *Rinodina interpolata* and *Xanthoparmelia mougeotii* are lichen species recorded for the second time from Turkey.

Degelia plumbea, which grows in open, relict woodlands and given as a rather rare species (Purvis et al., 1994), was found only in one locality together with moss on the rock from the research area.

In previous studies, 66 lichen species were recorded from Gemlik and Mudanya districts. In this study, 86 different lichen species were recorded from different localities in the same region.

Four lichen species were recorded before in İznik. Because there were no records from Orhangazi, the 81 lichen species recorded in this study are new records for Orhangazi.

Station number 84 at Orhangazi is located near a lime pit. *Protoblastenia rupestris*, which is determined as an indicator species of lime and calcareous substratum, was found only in this station. At the same station, saxicolous species such as *Aspicilia calcarea*, *Bagliettoa parmigera*, *Caloplaca alociza*, *C. crenulatella*, *Lecania rabenhorstii*, *Lecanora crenulata*, *L. dispersa*, *Sarcogyne regularis* and *Verrucaria nigrescens* were also recorded.

The nitrophilous species *Caloplaca cerina*, *Candelariella vitellina*, *Lecanora chlarofera*, *Lecanora hagenii*, *Phaeophyscia orbicularis*, *Physcia adscendens*, *Physcia aipolia* and *Xanthoria parietina* are common as a result of heavy fertilization in agricultural fields in the study area.

When the lichen species diversity of the 4 districts is compared, İznik is the richest. In addition, the most lichen taxa were found at station number 28 in İznik.

İznik district, which is larger than the other districts, has a rather rich plant cover, especially at high altitudes and protected moist habitats. Hence, these features of İznik make it richer than the other districts in terms of lichen diversity.

In Orhangazi district, suitable lichen substrata are rather limited because of settlements, traffic density and air pollution. Air pollution is a serious problem, especially in winter. In addition, this district is located in the vicinity of the main roads to Bursa and İstanbul.

Gemlik and Mudanya are located at the east and south of Gemlik Bay. Industrial development on the shore of Gemlik Bay and human settlements cause heavy air pollution in Gemlik. Hence, the central part of Gemlik is not suitable for lichen growth. However, the areas around Gemlik and Mudanya are covered with olive groves and maquis elements. In addition, rocky fields are suitable habitats for lichen development, in which the growth of saxicolous lichen species such as *Aspicilia* sp., *Acarospora* sp., *Caloplaca* sp., *Rhizocarpon* sp. and *Verrucaria* sp. is favoured.

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