

Lichen Species NOTES File 2006
 Cumulative Notes on Taxonomic Decisions for the FIA Lichen Indicator
 Update 28 March 2007

This file contains the cumulative notes on taxonomic decisions made for lichen species encountered in FIA Lichen Indicator data. These notes must be consulted before conducting analysis on FIA lichen data. Species are listed alphabetically by scientific name. Detailed notes are included under the current species name. When a species name is changed, rows for both the old name and the new name are included. Any species name included in the lichen master list but not included in this file either has been used starting with 1993 data and has remained stable in its application or was a new species encountered since 1993 that required no comments (e.g. was not included in any earlier species group).

The first lines in the comments field indicate whether and what action is required to modify data before analysis. If data from a single year are to be analyzed, action codes 1 and 2 apply, action codes 3 and 4 do not apply, and action codes 5, 6, and 7 should be checked to see if parts apply. If data from multiple years are to be analyzed, action codes 1-4 apply and action codes 5, 6, and 7 should be checked to see if parts apply. For year conditional combines, the phrase 'crossing [YEAR]' should be interpreted as 'data collected in [YEAR] and/or later, compared to data collected in [YEAR]-1 and/or earlier.' If data from both East and West are to be combined for analysis, analyst should consult the lichens IA for advice on how to reconcile actions for all taxa with action code 5. Additional text is informational.

Recommended actions for FIA analysis:

Action Codes: 0= no action, 1= exclude for most analysis, 2= always combine, 3= 'crossing [YEAR]' conditional combine, 4= subset before or after [YEAR] conditional combine, 5= region conditional combine, 6= unique complicated combination of actions 1-5, 7= complicated action not definable as a combination of other action codes. For Action codes 5 and 6, other Action Codes for specific regions or years may be described.

Region definitions:

East= Northern (N) and Southern (S) FIA Regions

West= Interior West (IW) and Pacific Northwest (PNW) FIA Regions

Sp. #	Sp name	Comments
601	<i>Bryoria abbreviata</i>	ACTION 2: 601 <i>Bryoria abbreviata</i> should be combined into 4551 <i>Nodobryoria abbreviata</i> for all analyses. 601 <i>B. abbreviata</i> = 4551 <i>N. abbreviata</i> .
603	<i>Bryoria capillaris</i>	ACTION 0. <i>Bryoria capillaris</i> includes the K- chemotype described as <i>B. pikei</i> . Specialists should note the chemistry of <i>B. capillaris</i> on the ID sheet.
606	<i>Bryoria chalybeiformis</i>	ACTION 0. The name <i>Bryoria fuscescens</i> was used in a broad sense for most specimens in the <i>B. fuscescens</i> complex. Only specimens which clearly fit the morphology of <i>B. chalybeiformis</i> were assigned the latter name.
610	<i>Bryoria fuscescens</i>	ACTION 0. Western US: The name <i>Bryoria fuscescens</i> was used in a broad sense for most specimens in the <i>B. fuscescens</i> complex. Only specimens which clearly fit the morphology of <i>B. chalybeiformis</i> , <i>B. glabra</i> , or <i>B. lanestris</i> were assigned one of these names.
611	<i>Bryoria glabra</i>	ACTION 0. The name <i>Bryoria fuscescens</i> was used in a broad sense for most specimens in the <i>B. fuscescens</i> complex. Only specimens which clearly fit the morphology of <i>B. glabra</i> were assigned the latter name.

613	<i>Bryoria lanestris</i>	ACTION 0. The name <i>Bryoria fuscescens</i> was used in a broad sense for most specimens in the <i>B. fuscescens</i> complex. Only specimens which clearly fit the morphology of <i>B. lanestris</i> were assigned the latter name.
627	<i>Bryoria</i> mystery olive sp.	ACTION 0. This taxon appears to be an identifiable undescribed species, see McCune and Geiser (1997) <i>Bryoria</i> key pg. 33. It should be kept separate for analysis.
615	<i>Bryoria oregana</i>	ACTION 2: 615 <i>Bryoria oregana</i> should be combined into 4552 <i>Nodobryoria oregana</i> for all analyses. <i>615 B. oregana = 4552 N. oregana</i>
8301	<i>Candelaria concolor</i>	ACTION 3: For analyzing data from multiple years crossing 2002, 8303 <i>Candelaria pacifica</i> should be combined into 8301 <i>C. concolor</i> . Before the 2002 data, this species included 8303 <i>C. pacifica</i> .
8303	<i>Candelaria pacifica</i>	ACTION 3: For analyzing data from multiple years crossing 2002, 8303 <i>Candelaria pacifica</i> should be combined into 8301 <i>C. concolor</i> . This is a distinct species segregated from 8301 <i>C. concolor</i> not officially named yet; in Nash et al. (2002...Sonoran Desert, v1). It differs from 8301 <i>C. concolor</i> in having greenish soredia from the underside, subfruticose habit, and an underside which mostly lacks cortex.
770	<i>Canomaculina</i>	ACTION 0. <i>Canomaculina</i> has been synonymized under <i>Parmotrema</i> (Blanco, et al 2005); we are retaining it at this time.
5304	<i>Canomaculina conferenda</i>	ACTION 0. 5304 <i>Parmotrema conferendum</i> = 5304 <i>Canomaculina conferenda</i> . The latter name was used starting with 2002 data.
5322	<i>Canomaculina neotropica</i>	ACTION 0. 5322 <i>Parmotrema neotropicum</i> = 5322 <i>Canomaculina neotropica</i> . The latter name was used starting with 2002 data.
5330	<i>Canomaculina subsumpta</i>	ACTION 0. 5330 <i>Parmotrema subsumptum</i> = 5330 <i>Canomaculina subsumpta</i> . The latter name was used starting with 2002 data.
5331	<i>Canomaculina subtinctoria</i>	ACTION 0. 5331 <i>Parmotrema subtinctorium</i> = 5331 <i>Canomaculina subtinctoria</i> . The latter name was used starting with 2002 data.
850	<i>Catapyrenium</i>	ACTION 1: Exclude for most analysis. Squamulose growth form included in CA 1998 data. This has been inconsistently collected and not included in data for most years. If it appears in a packet, it is recorded on the ID sheet but not entered in the data files.
851	<i>Catapyrenium tuckermanii</i>	ACTION 1: Exclude for most analysis. Squamulose growth form included in CA 1998 data. This has been inconsistently collected and not included in data for most years. If it appears in a packet, it is recorded on the ID sheet but not entered in the data files.
1003	<i>Cetraria californica</i>	ACTION 0. <i>Cetraria californica</i> = <i>Kaernefeltia californica</i> = <i>Tuckermannopsis californica</i> . FIA data have used the first name.
1004	<i>Cetraria canadensis</i>	ACTION 2: 8151 <i>Vulpicida canadensis</i> should be combined into 1004 <i>Cetraria canadensis</i> for all analyses. <i>1004 C. canadensis = 8151 V. canadensis</i> . Both names need to remain in the master list; data have been coded with one or the other name (but not both). For FIA data the former name is preferred.
1005	<i>Cetraria chlorophylla</i>	ACTION 0. <i>Cetraria chlorophylla</i> = <i>Tuckermannopsis chlorophylla</i> . The latter is the more recent name; FIA data retain the former name due to lack of scientific consensus.

1007	<i>Cetraria coralligera</i>	ACTION 0. 1007 <i>Cetraria coralligera</i> = 1007 <i>Tuckermanella coralligera</i> - it retains the same code and acronym. 7920 <i>Tuckermanella</i> was recently described (Esslinger in Mycotaxon 85); see note under 7920.
1011	<i>Cetraria merrillii</i>	ACTION 0. <i>Cetraria merrillii</i> = <i>Tuckermannopsis merrillii</i> . The latter is the more recent name; FIA data retain the former name due to lack of scientific consensus.
1013	<i>Cetraria orbata</i>	ACTION 0. <i>Cetraria orbata</i> = <i>Tuckermannopsis orbata</i> . The latter is the more recent name; FIA data retain the former name due to lack of scientific consensus.
1014	<i>Cetraria pallidula</i>	ACTION 0. <i>Cetraria pallidula</i> = <i>Ahtiana pallidula</i> . The latter is the more recent name; FIA data use the former name due to lack of scientific consensus.
1015	<i>Cetraria pinastri</i>	ACTION 2: 8152 <i>Vulpicida pinastri</i> should be combined into 1015 <i>Cetraria pinastri</i> for all analyses. 1015 <i>C. pinastri</i> = 8152 <i>V. pinastri</i> . Both names need to remain in the master list; data have been coded with one or the other name (but not both). For FIA data the former name is preferred.
1016	<i>Cetraria platyphylla</i>	ACTION 0. <i>Cetraria platyphylla</i> = <i>Tuckermannopsis platyphylla</i> . The latter is the more recent name; FIA data retain the former name due to lack of scientific consensus.
1020	<i>Cetraria viridis</i>	ACTION 2: 8153 <i>Vulpicida viridis</i> should be combined into 1020 <i>Cetraria viridis</i> for all analyses. 1020 <i>C. viridis</i> = 8153 <i>V. viridis</i> . Both names need to remain in the master list; data have been coded with one or the other name (but not both). For FIA data the former name is preferred.
1180	<i>Cladina</i>	ACTION 0. 1180 <i>Cladina</i> = 1180 <i>Cladina</i> -form Ahti and DePriest (2001) shifted all <i>Cladina</i> species to <i>Cladonia</i> .
1180	<i>Cladina</i> -form	ACTION 0. 1180 <i>Cladina</i> = 1180 <i>Cladina</i> -form If a specialist finds a small <i>Cladina</i> -like specimen unidentifiable to species, it should be placed in the 1180 <i>Cladina</i> -form category. Ahti and DePriest (2001) shifted all <i>Cladina</i> species to <i>Cladonia</i> .
1182	<i>Cladina arbuscula</i>	ACTION 0. 1182 <i>Cladina arbuscula</i> = 1182 <i>Cladonia arbuscula</i> The latter name was used starting with 2004 data.
1181	<i>Cladina rangiferina</i>	ACTION 0. 1181 <i>Cladina rangiferina</i> = 1182 <i>Cladonia rangiferina</i> The latter name was used starting with 2004 data.
1183	<i>Cladina subtenuis</i>	ACTION 0. 1183 <i>Cladina subtenuis</i> = 1183 <i>Cladonia subtenuis</i> The latter name was used starting with 2004 data.
1182	<i>Cladonia arbuscula</i>	ACTION 0. 1182 <i>Cladina arbuscula</i> = 1182 <i>Cladonia arbuscula</i> The latter name was used starting with 2004 data.
1203	<i>Cladonia bacillaris</i>	ACTION 0. <i>Cladonia bacillaris</i> = <i>Cladonia macilenta</i> var. <i>bacillaris</i> . The former name is retained for brevity.

1211	<i>Cladonia coniocraea</i>	<p>ACTION 5: ACTION 2: West - 1211 <i>Cladonia coniocraea</i> should be combined into 1228 <i>C. ochrochlora</i>. ACTION 2: East - 1228 <i>C. ochrochlora</i> should be combined into 1211 <i>C. coniocraea</i>. West: West coast region, 1994-5, this species was distinguished from 1228 <i>C. ochrochlora</i>, though some experts group them as the same taxon. In Colorado in 1992-1996, then 2000 data on, and in the West Coast region starting with 1998 data, the name 1228 <i>C. ochrochlora</i> was applied to include both 1211 <i>C. coniocraea</i> and 1228 <i>C. ochrochlora</i>. East: In 1993-1998 1211 <i>C. coniocraea</i> was applied as the default name; in the East it is the more common taxon. Only very characteristic specimens were labeled 1228 <i>C. ochrochlora</i>. Starting with 1999 data, a broader concept of 1228 <i>C. ochrochlora</i> has been applied, see note under 1228.</p>
1225	<i>Cladonia macilenta</i>	<p>ACTION 0. We follow Hammer and treat <i>Cladonia macilenta</i> and <i>C. transcendens</i> as separate species. <i>C. transcendens</i> is yellowish (usnic acid); <i>C. macilenta</i> is not.</p>
1228	<i>Cladonia ochrochlora</i>	<p>ACTION 5: ACTION 2: West - 1211 <i>Cladonia coniocraea</i> should be combined into 1228 <i>C. ochrochlora</i>. ACTION 2: East - 1228 <i>C. ochrochlora</i> should be combined into 1211 <i>C. coniocraea</i>. Western US: In Colorado in 1992-1996, then 2000 data on, and in the West Coast region starting with 1998 data, the name 1228 <i>C. ochrochlora</i> was applied to include both 1211 <i>C. coniocraea</i> and 1228 <i>C. ochrochlora</i>. Eastern US: in 1993-1998 1211 <i>C. coniocraea</i> was applied as the default name; in the East it is the more common taxon. Only very characteristic specimens were labeled 1228 <i>C. ochrochlora</i>. Starting with 1999 data, a broader concept of 1228 <i>C. ochrochlora</i> has been applied; if any podetium of a specimen meets this species' criteria, the specimen is assigned here.</p>
1181	<i>Cladonia rangiferina</i>	<p>ACTION 0. 1181 <i>Cladina rangiferina</i> = 1181 <i>Cladonia rangiferina</i> The latter name was used starting with 2004 data.</p>
1183	<i>Cladonia subtenuis</i>	<p>ACTION 0. 1183 <i>Cladina subtenuis</i> = 1183 <i>Cladonia subtenuis</i> The latter name was used starting with 2004 data.</p>
1240	<i>Cladonia transcendens</i>	<p>ACTION 0. We follow Hammer and treat <i>Cladonia macilenta</i> and <i>C. transcendens</i> as separate species. <i>C. transcendens</i> is yellowish (usnic acid); <i>C. macilenta</i> is not.</p>
1404	<i>Collema curtisporum</i>	<p>ACTION 0. <i>Collema curtisporum</i> and <i>C. nigrescens</i> can be separated reliably only by spores; their geographic overlap is minimal. PNW specimens west of the Cascades crest can be assigned to <i>C. nigrescens</i>. PNW specimens east of the Cascades crest, and Idaho and Montana specimens, can be assigned to <i>C. curtisporum</i>. In SW Oregon and extreme N California, their range overlaps.</p>
1412	<i>Collema nigrescens</i>	<p>ACTION 0. <i>Collema curtisporum</i> and <i>C. nigrescens</i> can be separated reliably only by spores; their geographic overlap is minimal. PNW specimens west of the Cascades crest can be assigned to <i>C. nigrescens</i>. PNW specimens east of the Cascades crest, and Idaho and Montana specimens, can be assigned to <i>C. curtisporum</i>. In SW Oregon and extreme N California, their range overlaps.</p>
1600	<i>Degelia</i>	<p>ACTION 1: Exclude for most FIA analysis. Placodioid growth form included in some data. This has been collected inconsistently and not included in data for most years. If it appears in a packet, it is recorded on the ID sheet but not entered in the data files.</p>

1601	<i>Degelia plumbea</i>	ACTION 1: Exclude for most FIA analysis. Placodioid growth form included in some data. This has been collected inconsistently and not included in data for most years. If it appears in a packet, it is recorded on the ID sheet but not entered in the data files.
2702	<i>Flavopunctelia flaventior</i>	ACTION 0. Some material is intermediate between <i>Flavopunctelia flaventior</i> and <i>F. soledica</i> in that it has only marginal soralia but also has numerous pseudocyphellae. Starting with 1998 data, we follow Hale's heavier weighting of pseudocyphellae and class these intermediates with <i>F. flaventior</i> . For pre-1998 data, species names were assigned with heavier weighting on soralia characteristics.
2704	<i>Flavopunctelia soledica</i>	ACTION 0. See note under 2702 <i>Flavopunctelia flaventior</i> . Starting with 1998 data, heavier weighting was placed on pseudocyphellae. For pre-1998 data, intermediates with crescent-shaped marginal soralia were classed with this taxon, not <i>F. flaventior</i> , as was done starting with 1998 data.
2650	<i>Fuscopannaria</i>	ACTION 0. This species of this genus were segregated from <i>Pannaria/Parmeliella</i> and are considered squamulose to subcrustose. Crews are trained to collect the entire group (<i>Pannaria</i> , <i>Fuscopannaria</i> , <i>Parmeliella</i> , <i>Protopannaria</i>), and it is included in FIA data/analyses. There were code and species changes under the genera <i>Fuscopannaria</i> , <i>Pannaria</i> , <i>Parmeliella</i> , and <i>Protopannaria</i> . The years changes were made are uncertain, however, data have been checked, and the current coding is fully backward compatible.
3000	<i>Hypocenomyce</i>	ACTION 1: Exclude for most FIA analysis. Squamulose/crustose growth form included in some data. This has been collected inconsistently and not included in data for most years. If it appears in a packet, it is recorded on the ID sheet but not entered in the data files.
3001	<i>Hypocenomyce anthracophila</i>	ACTION 1: Exclude for most FIA analysis. Squamulose/crustose growth form included in some data. This has been collected inconsistently and not included in data for most years. If it appears in a packet, it is recorded on the ID sheet but not entered in the data files.
3002	<i>Hypocenomyce castaneocinerea</i>	ACTION 1: Exclude for most FIA analysis. Squamulose/crustose growth form included in some data. This has been collected inconsistently and not included in data for most years. If it appears in a packet, it is recorded on the ID sheet but not entered in the data files.
3003	<i>Hypocenomyce friesii</i>	ACTION 1: Exclude for most FIA analysis. Squamulose/crustose growth form included in some data. This has been collected inconsistently and not included in data for most years. If it appears in a packet, it is recorded on the ID sheet but not entered in the data files.
3004	<i>Hypocenomyce leucococca</i>	ACTION 1: Exclude for most FIA analysis. Squamulose/crustose growth form included in some data. This has been collected inconsistently and not included in data for most years. If it appears in a packet, it is recorded on the ID sheet but not entered in the data files.
3005	<i>Hypocenomyce praestabilis</i>	ACTION 1: Exclude for most FIA analysis. Squamulose/crustose growth form included in some data. This has been collected inconsistently and not included in data for most years. If it appears in a packet, it is recorded on the ID sheet but not entered in the data files.
3006	<i>Hypocenomyce scalaris</i>	ACTION 1: Exclude for most FIA analysis. Squamulose/crustose growth form included in some data. This has been collected inconsistently and not included in data for most years. If it appears in a packet, it is recorded on the ID sheet but not entered in the data files.
3007	<i>Hypocenomyce sorophora</i>	ACTION 1: Exclude for most FIA analysis. Squamulose/crustose growth form included in some data. This has been collected inconsistently and not included in data for most years. If it appears in a packet, it is recorded on the ID sheet but not entered in the data files.

3008	<i>Hypocenomyce xanthococca</i>	ACTION 1: Exclude for most FIA analysis. Squamulose/crustose growth form included in some data. This has been collected inconsistently and not included in data for most years. If it appears in a packet, it is recorded on the ID sheet but not entered in the data files.
3224	<i>Hypotrachyna afrorevoluta</i>	ACTION 0. <i>Hypotrachyna afrorevoluta</i> is reported in the US (Knudsen and Lendemer 2005). Similar to 3218 <i>H. showmanii</i> but is emaculate and has sorediate pustules (Lendemer 2006).
3218	<i>Hypotrachyna showmanii</i>	ACTION 0. <i>Hypotrachyna showmanii</i> is now considered widely distributed in north/central eastern US with medullary chemistry C+ and KC + pink/red (Lendemer & Harris 2006). Some specimens may have been previously identified as 5103 <i>Parmelinopsis spumosa</i> .
8600	<i>Lecanora</i>	ACTION 1: Exclude for most FIA analysis. Crustose growth form included in some data. This has been collected inconsistently and not included in data for most years. If it appears in a packet, it is recorded on the ID sheet but not entered in the data files.
8601	<i>Lecanora muralis</i>	ACTION 1: Exclude for most FIA analysis. Lobate crustose growth form included in some data. This has been collected inconsistently and not included in data for most years. If it appears in a packet, it is recorded on the ID sheet but not entered in the data files.
3625	<i>Leptogium lichenoides</i>	ACTION 0. In 1994 western data, this taxon is used <i>sensu lato</i> (and may include <i>Leptogium californicum</i>). In all other data, this taxon is used <i>sensu stricto</i> .
4000	<i>Melanelia</i>	ACTION 0. The segregate genera <i>Melanoelixia</i> and <i>Melanohalea</i> were used for specimens identified to species starting with 2005 data (see Blanco et al. 2004). All specimens too small to identify to species will remain 4000 <i>Melanelia</i> sp.
4001	<i>Melanelia albertana</i>	ACTION 0. 4001 <i>Melanelia albertana</i> = 4001 <i>Melanelixia albertana</i> . The latter name was used starting with 2005 data.
4002	<i>Melanelia elegantula</i>	ACTION 0. 4002 <i>Melanelia elegantula</i> = 4001 <i>Melanohalea elegantula</i> . The latter name was used starting with 2005 data.
4003	<i>Melanelia exasperata</i>	ACTION 0. 4003 <i>Melanelia exasperata</i> = 4003 <i>Melanohalea exasperata</i> . The latter name was used starting with 2005 data.
4004	<i>Melanelia exasperatula</i>	ACTION 0. 4004 <i>Melanelia exasperatula</i> = 4004 <i>Melanohalea exasperatula</i> . The latter name was used starting with 2005 data.
4005	<i>Melanelia fuliginosa</i>	ACTION 0. 4005 <i>Melanelia fuliginosa</i> = 4005 <i>Melanelixia fuliginosa</i> . The latter name was used starting with 2005 data.
4006	<i>Melanelia glabra</i>	ACTION 0. 4006 <i>Melanelia glabra</i> = 4006 <i>Melanelixia glabra</i> . The latter name was used starting with 2005 data.
4007	<i>Melanelia glabroides</i>	ACTION 0. 4007 <i>Melanelia glabroides</i> = 4006 <i>Melanelixia glabroides</i> . The latter name was used starting with 2005 data.
4008	<i>Melanelia halei</i>	ACTION 0. 4008 <i>Melanelia halei</i> = 4008 <i>Melanohalea halei</i> . The latter name was used starting with 2005 data.
4009	<i>Melanelia infumata</i>	ACTION 0. 4009 <i>Melanelia infumata</i> = 4009 <i>Melanohalea infumata</i> . The latter name was used starting with 2005 data.

4010	<i>Melanelia multispora</i>	ACTION 2: 4010 <i>Melanohalea multispora</i> should be combined into 4017 <i>M. subolivacea</i> . 4010 <i>Melanelia multispora</i> = 4010 <i>Melanohalea multispora</i> . The latter name was used starting with 2005 data. See the latter for additional notes.
4011	<i>Melanelia olivacea</i>	ACTION 0. 4011 <i>Melanelia olivacea</i> = 4011 <i>Melanohalea olivacea</i> . The latter name was used starting with 2005 data.
4012	<i>Melanelia olivaceoides</i>	ACTION 0. 4012 <i>Melanelia olivaceoides</i> = 4012 <i>Melanohalea olivaceoides</i> . The latter name was used starting with 2005 data.
4013	<i>Melanelia septentrionalis</i>	ACTION 0. 4013 <i>Melanelia septentrionalis</i> = 4013 <i>Melanohalea septentrionalis</i> . The latter name was used starting with 2005 data.
4014	<i>Melanelia subargentifera</i>	ACTION 0. 4014 <i>Melanelia subargentifera</i> = 4014 <i>Melanelixia subargentifera</i> . The latter name was used starting with 2005 data.
4015	<i>Melanelia subaurifera</i>	ACTION 0. 4015 <i>Melanelia subaurifera</i> = 4015 <i>Melanelixia subaurifera</i> . The latter name was used starting with 2005 data.
4016	<i>Melanelia subelegantula</i>	ACTION 0. 4016 <i>Melanelia subelegantula</i> = 4016 <i>Melanohalea subelegantula</i> . The latter name was used starting with 2005 data.
4017	<i>Melanelia subolivacea</i>	ACTION 2: 4010 <i>Melanohalea multispora</i> should be combined into 4017 <i>M. subolivacea</i> . 4017 <i>Melanelia subolivacea</i> = 4017 <i>Melanohalea subolivacea</i> . The latter name was used starting with 2005 data. See the latter for additional notes.
4018	<i>Melanelia trabeculata</i>	ACTION 0. 4018 <i>Melanelia trabeculata</i> = 4018 <i>Melanohalea trabeculata</i> . The latter name was used starting with 2005 data.
4001	<i>Melanelixia albertana</i>	ACTION 0. 4001 <i>Melanelia albertana</i> = 4001 <i>Melanelixia albertana</i> . The latter name was used starting with 2005 data.
4005	<i>Melanelixia fuliginosa</i>	ACTION 0. 4005 <i>Melanelia fuliginosa</i> = 4005 <i>Melanelixia fuliginosa</i> . The latter name was used starting with 2005 data.
4006	<i>Melanelixia glabra</i>	ACTION 0. 4006 <i>Melanelia glabra</i> = 4006 <i>Melanelixia glabra</i> . The latter name was used starting with 2005 data.
4007	<i>Melanelixia glabroides</i>	ACTION 0. 4007 <i>Melanelia glabroides</i> = 4006 <i>Melanelixia glabroides</i> . The latter name was used starting with 2005 data.
4014	<i>Melanelixia subargentifera</i>	ACTION 0. 4014 <i>Melanelia subargentifera</i> = 4014 <i>Melanelixia subargentifera</i> . The latter name was used starting with 2005 data.
4015	<i>Melanelixia subaurifera</i>	ACTION 0. 4015 <i>Melanelia subaurifera</i> = 4015 <i>Melanelixia subaurifera</i> . The latter name was used starting with 2005 data.
4002	<i>Melanohalea elegantula</i>	ACTION 0. 4002 <i>Melanelia elegantula</i> = 4001 <i>Melanohalea elegantula</i> . The latter name was used starting with 2005 data.
4003	<i>Melanohalea exasperata</i>	ACTION 0. 4003 <i>Melanelia exasperata</i> = 4003 <i>Melanohalea exasperata</i> . The latter name was used starting with 2005 data.

4004	<i>Melanohalea exasperatula</i>	ACTION 0. 4004 <i>Melanelia exasperatula</i> = 4004 <i>Melanohalea exasperatula</i> . The latter name was used starting with 2005 data.
4008	<i>Melanohalea halei</i>	ACTION 0. 4008 <i>Melanelia halei</i> = 4008 <i>Melanohalea halei</i> . The latter name was used starting with 2005 data.
4009	<i>Melanohalea infumata</i>	ACTION 0. 4009 <i>Melanelia infumata</i> = 4009 <i>Melanohalea infumata</i> . The latter name was used starting with 2005 data.
4010	<i>Melanohalea multispora</i>	ACTION 2: 4010 <i>Melanohalea multispora</i> should be combined into 4017 <i>M. subolivacea</i> . 4010 <i>Melanelia multispora</i> = 4010 <i>Melanohalea multispora</i> . The latter name was used starting with 2005 data. Data from 1994-98 normally include 4010 <i>M. multispora</i> with 4017 <i>M. subolivacea</i> . Starting with 1999, if this species is recorded, it has undergone a spore exam, and represents a correct name.
4011	<i>Melanohalea olivacea</i>	ACTION 0. 4011 <i>Melanelia olivacea</i> = 4011 <i>Melanohalea olivacea</i> . The latter name was used starting with 2005 data.
4012	<i>Melanohalea olivaceoides</i>	ACTION 0. 4012 <i>Melanelia olivaceoides</i> = 4012 <i>Melanohalea olivaceoides</i> . The latter name was used starting with 2005 data.
4013	<i>Melanohalea septentrionalis</i>	ACTION 0. 4013 <i>Melanelia septentrionalis</i> = 4013 <i>Melanohalea septentrionalis</i> . The latter name was used starting with 2005 data.
4016	<i>Melanohalea subelegantula</i>	ACTION 0. 4016 <i>Melanelia subelegantula</i> = 4016 <i>Melanohalea subelegantula</i> . The latter name was used starting with 2005 data.
4017	<i>Melanohalea subolivacea</i>	ACTION 2: 4010 <i>Melanohalea multispora</i> should be combined into 4017 <i>M. subolivacea</i> . 4017 <i>Melanelia subolivacea</i> = 4017 <i>Melanohalea subolivacea</i> . The latter name was used starting with 2005 data. Western US: In data from 1994-8 this taxon normally represents a group including 4017 <i>M. subolivacea</i> and 4010 <i>M. multispora</i> , using the name <i>Melanelia subolivacea</i> group. Also see notes under 4010.
4018	<i>Melanohalea trabeculata</i>	ACTION 0. 4018 <i>Melanelia trabeculata</i> = 4018 <i>Melanohalea trabeculata</i> . The latter name was used starting with 2005 data.
4551	<i>Nodobryoria abbreviata</i>	ACTION 2: 601 <i>Bryoria abbreviata</i> should be combined into 4551 <i>Nodobryoria abbreviata</i> for all analyses. 601 <i>B. abbreviata</i> = 4551 <i>N. abbreviata</i> . The latter name, with different numerical code and acronym from the former name, was used starting with 1995 data. Idaho 1996 data contain both names.
4552	<i>Nodobryoria oregana</i>	ACTION 2: 615 <i>Bryoria oregana</i> should be combined into 4552 <i>Nodobryoria oregana</i> for all analyses. 615 <i>B. oregana</i> = 4552 <i>N. oregana</i> . The latter name was applied starting 1995 in all western states. Idaho 1996 data contain both names.
4600	<i>Normandina</i>	ACTION 1: Exclude for most FIA analysis. Squamulose growth form included in some data. This has been collected inconsistently and not included in data for most years. If it appears in a packet, it is recorded on the ID sheet but not entered in the data files.
4601	<i>Normandina pulchella</i>	ACTION 1: Exclude for most FIA analysis. Squamulose growth form included in some data. This has been collected inconsistently and not included in data for most years. If it appears in a packet, it is recorded on the ID sheet but not entered in the data files.
4700	<i>Pannaria</i>	ACTION 0.

		<p>This genus is considered foliose to squamulose. Crews are trained to collected the entire group (<i>Pannaria</i>, <i>Fuscopannaria</i>, <i>Parmeliella</i>, <i>Protopannaria</i>), and it is included in FIA data/analyses.</p> <p>There were code and species changes under the genera <i>Fuscopannaria</i>, <i>Pannaria</i>, <i>Parmeliella</i>, and <i>Protopannaria</i>. The years changes were made are uncertain, however, data have been checked, and the current coding is fully backward compatible.</p>
4900	<i>Parmeliella</i>	<p>ACTION 0.</p> <p>This genus is considered squamulose and keys with <i>Pannaria</i>. Crews are trained to collected the entire group (<i>Pannaria</i>, <i>Fuscopannaria</i>, <i>Parmeliella</i>, <i>Protopannaria</i>), and it is included in FIA data/analyses.</p> <p>There were code and species changes under the genera <i>Fuscopannaria</i>, <i>Pannaria</i>, <i>Parmeliella</i>, and <i>Protopannaria</i>. The years changes were made are uncertain, however, data have been checked, and the current coding is fully backward compatible.</p>
5300	<i>Parmotrema</i>	<p>ACTION 0.</p> <p>Though <i>Canomaculina</i> and <i>Rimelia</i> have been synonymized under <i>Parmotrema</i> (Blanco, et al 2005), we are retaining them at this time.</p>
5338	<i>Parmotrema cetratum</i>	<p>ACTION 2: 5338 <i>Parmotrema cetratum</i> should be combined into 7101 <i>Rimelia cetrata</i> for all analyses.</p> <p>Both codes have been used in data. 7101 <i>R. cetrata</i> is preferred.</p>
5304	<i>Parmotrema conferendum</i>	<p>ACTION 0.</p> <p>5304 <i>Parmotrema conferendum</i> = 5304 <i>Canomaculina conferenda</i>. The latter name was used starting in 2003, for the 2002 data set.</p>
5322	<i>Parmotrema neotropicum</i>	<p>ACTION 0.</p> <p>5322 <i>Parmotrema neotropicum</i> = 5322 <i>Canomaculina neotropica</i>. The latter name was used starting in 2003, for the 2002 data set.</p>
5337	<i>Parmotrema subsidiosum</i>	<p>ACTION 2: 5337 <i>Parmotrema subsidiosum</i> should be combined into 7106 <i>Rimelia subsidiosa</i> for all analyses.</p> <p>Both codes have been used in the data. 7106 <i>R. subsidiosa</i> is preferred.</p>
5330	<i>Parmotrema subsumptum</i>	<p>ACTION 0.</p> <p>5330 <i>Parmotrema subsumptum</i> = 5330 <i>Canomaculina subsumpta</i>. The latter name was used starting in 2003, for the 2002 data set.</p>
5331	<i>Parmotrema subtinctorium</i>	<p>ACTION 0.</p> <p>5331 <i>Parmotrema subtinctorium</i> = 5331 <i>Canomaculina subtinctoria</i>. The latter name was used starting in 2003, for the 2002 data set.</p>
5602	<i>Phaeophyscia cernohorskyi</i>	<p>ACTION 2: 5602 <i>P. cernohorskyi</i> should be combined into 5605 <i>P. hirsuta</i> for all analyses.</p> <p>5602 <i>Phaeophyscia cernohorskyi</i> has been synonymized with 5605 <i>P. hirsuta</i>, by Esslinger in Nash et al. (2004...Sonoran Desert, v2). The latter name is used for the taxon starting with the 2003 data set.</p>
5616	<i>Phaeophyscia endococcina</i>	<p>ACTION 6:</p> <p>ACTION 5:</p> <p>ACTION 3: West - for analyzing data from multiple years crossing 2005, 5616 <i>Phaeophyscia endococcina</i> should be combined into 5618 <i>Phaeophyscia endococcinodes</i>.</p> <p>ACTION 4: West - for data analysis pre-2005, 5616 <i>Phaeophyscia endococcina</i> should be combined into 5618 <i>Phaeophyscia endococcinodes</i>.</p> <p>ACTION 0: East.</p> <p>This species is considered exceedingly rare in North America. Esslinger considers this a different species from 5616 <i>Phaeophyscia endococcinodes</i> in Nash et al. (2004... Sonoran Desert, v2), though Moberg considers it a synonym. At this point the two species should be treated separately.</p>

5618	<i>Phaeophyscia endococcinodes</i>	<p>ACTION 6: ACTION 5: ACTION 3: West - for analyzing data from multiple years crossing 2005, 5616 <i>Phaeophyscia endococcina</i> should be combined into 5618 <i>Phaeophyscia endococcinodes</i>. ACTION 4: West - for data analysis pre-2005, 5616 <i>Phaeophyscia endococcina</i> should be combined into 5618 <i>Phaeophyscia endococcinodes</i>. ACTION 0: East.</p> <p>This species is considered exceedingly rare in North America. Esslinger considers this a different species from 5616 <i>Phaeophyscia endococcina</i> in Nash et al. (2004... Sonoran Desert, v2), though Moberg considers it a synonym. At this point the two species should be treated separately.</p>
5605	<i>Phaeophyscia hirsuta</i>	<p>ACTION 2: 5602 <i>P. cernohorskyi</i> should be combined into 5605 <i>P. hirsuta</i> for all analyses. 5602 <i>Phaeophyscia cernohorskyi</i> has been synonymized with 5605 <i>P. hirsuta</i>, by Esslinger in Nash et al. (2004... Sonoran Desert, v2). The latter name is used for the taxon starting with the 2003 data set. In arid W habitats small specimens of 5605 <i>Phaeophyscia hirsuta</i>, 5711 <i>Physcia dubia</i>, and 5801 <i>Physciella chloantha</i> may be morphologically indistinguishable. 5711 <i>Physcia dubia</i> can be distinguished in being cortex K+ yellow (use filter paper method for tiny specimens). 5605 <i>Phaeophyscia hirsuta</i> can be distinguished by its paraplectenchymatous lower cortex, however, FIA does not pay specialists to section. All three have been found in NV/UT.</p>
5702	<i>Physcia aipolia</i>	<p>ACTION 0. <i>Physcia aipolia</i> and <i>P. stellaris</i> were distinguished solely on the K reaction of the medulla; other characters are not reliably correlated with the K reaction.</p>
5705	<i>Physcia biziana</i>	<p>ACTION 0. <i>Physcia biziana</i> intergrades with <i>P. stellaris</i>, both having K- medulla. Moderately pruinose specimens with short, rounded, scalloped lobes were named <i>P. biziana</i>; moderately pruinose specimens with narrower lobes of <i>P. aipolia</i> type were named <i>P. stellaris</i>. Specimens with little or no pruinosity were named <i>P. stellaris</i> regardless of lobe size.</p>
5711	<i>Physcia dubia</i>	<p>ACTION 0. For UT and NV in 1999, reports of 5711 <i>Physcia dubia</i> were judged by T. Esslinger (1999) to be intermediate between <i>P. dimidiata</i> and <i>P. dubia</i>. Because the mean elevational distribution of this "species" was >1000 ft different than of <i>P. dimidiata</i>, we have retained the name pending further study and do not recommend blanket combining of the two species. In arid W habitats small specimens of 5605 <i>Phaeophyscia hirsuta</i>, 5711 <i>Physcia dubia</i>, and 5801 <i>Physciella chloantha</i> may be morphologically indistinguishable. 5711 <i>Physcia dubia</i> can be distinguished in being cortex K+ yellow (use filter paper method for tiny specimens). 5605 <i>Phaeophyscia hirsuta</i> can be distinguished by its paraplectenchymatous lower cortex, however, FIA does not pay specialists to section. All three have been found in NV/UT.</p>
5721	<i>Physcia leptalea</i>	<p>ACTION 0. 5721 <i>Physcia semipinnata</i> = 5721 <i>P. leptalea</i> The latter was used starting with 2003 data.</p>
5721	<i>Physcia semipinnata</i>	<p>ACTION 0. 5721 <i>Physcia semipinnata</i> = 5721 <i>P. leptalea</i> The latter was used starting with 2003 data.</p>
5723	<i>Physcia stellaris</i>	<p>ACTION 0. <i>Physcia aipolia</i> and <i>P. stellaris</i> were distinguished solely on the K reaction of the medulla; other characters are not reliably correlated with the K reaction. <i>P. biziana</i> intergrades with <i>P. stellaris</i>, both having K- medulla. Moderately pruinose specimens with short, rounded, scalloped lobes were named <i>P. biziana</i>; moderately pruinose specimens with narrower lobes of <i>P. aipolia</i> type were named <i>P. stellaris</i>. Specimens with little or no pruinosity were named <i>P. stellaris</i> regardless of lobe size.</p>

5801	<i>Physciella chloantha</i>	ACTION 0. In arid W habitats small specimens of 5605 <i>Phaeophyscia hirsuta</i> , 5711 <i>Physcia dubia</i> , and 5801 <i>Physciella chloantha</i> may be morphologically indistinguishable. 5711 <i>Physcia dubia</i> can be distinguished in being cortex K+ yellow (use filter paper method for tiny specimens). 5605 <i>Phaeophyscia hirsuta</i> can be distinguished by its paraplectenchymatous lower cortex, however, FIA does not pay specialists to section. All three have been found in NV/UT.
5901	<i>Physconia detera</i>	ACTION 5: ACTION 3: West - for analyzing data from multiple years crossing 1998, 5907 <i>Physconia isidiigera</i> , 5906 <i>P. perisidiosa</i> , and 5911 <i>P. leucoleiptes</i> should be combined into 5901 <i>P. detera</i> . ACTION 0: East. Western US: Where 5901 <i>P. detera</i> occurs in data prior to 1998 data, it represents a composite including one or all of these taxa: 5907 <i>P. isidiigera</i> , 5911 <i>P. leucoleiptes</i> and 5906 <i>P. perisidiosa</i> . From 1998 onward, these taxa were distinguished in all data sets. Eastern US: <i>P. detera</i> , <i>P. leucoleiptes</i> , and <i>P. perisidiosa</i> are distinguished in all data sets.
5907	<i>Physconia isidiigera</i>	ACTION 5: ACTION 3: West - for analyzing data from multiple years crossing 1998, 5907 <i>Physconia isidiigera</i> , 5906 <i>P. perisidiosa</i> , and 5911 <i>P. leucoleiptes</i> should be combined into 5901 <i>P. detera</i> . ACTION 0: East. Western US: This taxonomic name was first applied in 1998 data; it represents a portion of the pre-1998 taxon 5901 <i>P. detera</i> .
5911	<i>Physconia leucoleiptes</i>	ACTION 5: ACTION 3: West - for analyzing data from multiple years crossing 1998, 5907 <i>Physconia isidiigera</i> , 5906 <i>P. perisidiosa</i> , and 5911 <i>P. leucoleiptes</i> should be combined into 5901 <i>P. detera</i> . ACTION 0: East. Western US: If this taxon occurs in pre-1998 data, it represents a portion of taxon 5901 <i>P. detera</i> . Eastern US: <i>P. detera</i> , <i>P. leucoleiptes</i> , and <i>P. perisidiosa</i> are distinguished in all data sets.
5906	<i>Physconia perisidiosa</i>	ACTION 5: ACTION 3: West - for analyzing data from multiple years crossing 1998, 5907 <i>Physconia isidiigera</i> , 5906 <i>P. perisidiosa</i> , and 5911 <i>P. leucoleiptes</i> should be combined into 5901 <i>P. detera</i> . ACTION 0: East. Western US: This taxonomic name was first applied in 1998 data; it represents a portion of the pre-1998 taxon <i>P. detera</i> . Eastern US: <i>P. detera</i> , <i>P. leucoleiptes</i> , and <i>P. perisidiosa</i> are distinguished in all data sets.
6250	<i>Protopannaria</i>	ACTION 0. This genus is considered squamulose and keys with Pannariaceae. Crews are trained to collect the entire group (<i>Pannaria</i> , <i>Fuscopannaria</i> , <i>Parmeliella</i> , <i>Protopannaria</i>), and it is included in FIA data/analyses. There were code and species changes under the genera <i>Fuscopannaria</i> , <i>Pannaria</i> , <i>Parmeliella</i> , and <i>Protopannaria</i> . The years changes were made are uncertain, however, data have been checked, and the current coding is fully backward compatible.
6404	<i>Pseudocyphellaria crocata</i>	ACTION 3: For analyzing data from multiple years crossing 2003, 6408 <i>Pseudocyphellaria perpetua</i> should be combined into 6404 <i>P. crocata</i> . Data recorded before 2004 as 6404 <i>P. crocata</i> included the new segregate species 6408 <i>P. perpetua</i> .

6408	<i>Pseudocyphellaria perpetua</i>	ACTION 3: For analyzing data from multiple years crossing 2003, 6408 <i>Pseudocyphellaria perpetua</i> should be combined into 6404 <i>P. crocata</i> . This name (Miadlikowska et al. 2002) was first applied in the 2004 data. Prior to this, it was most likely identified as 6404 <i>P. crocata</i> . 6408 <i>P. perpetua</i> has marginal soralia, a yellow medulla and tends to have a grayer upper cortex, while 6404 <i>P. crocata</i> has mostly laminal soredia, a white medulla and it tends to have a browner upper cortex.
6600	<i>Psoroma</i>	ACTION 1: Exclude for most FIA analysis. Squamulose/crustose growth form included in some data. This has been collected inconsistently and not included in data for most years. If it appears in a packet, it is recorded on the ID sheet but not entered in the data files.
6601	<i>Psoroma hypnorum</i>	ACTION 1: Exclude for most FIA analysis. Squamulose/crustose growth form included in some data. This has been collected inconsistently and not included in data for most years. If it appears in a packet, it is recorded on the ID sheet but not entered in the data files.
6706	<i>Punctelia perreticulata</i>	ACTION 2: 6711 <i>Punctelia subrudecta</i> should be combined into 6706 <i>P. perreticulata</i> for all analyses. 6711 <i>P. subrudecta</i> is considered a misidentification of 6706 <i>P. perreticulata</i> for North America (Aptroot 2003).
6711	<i>Punctelia subrudecta</i>	ACTION 2: 6711 <i>Punctelia subrudecta</i> should be combined into 6706 <i>P. perreticulata</i> for all analyses. 6711 <i>P. subrudecta</i> is considered a misidentification of 6706 <i>P. perreticulata</i> for North America (Aptroot 2003).
6801	<i>Pyxine albobirens</i>	ACTION 7. ACTION 3: For any analysis where Southern (S) FIA Region is included - for analyzing data from multiple years crossing 1999, 6801 <i>Pyxine albobirens</i> , 6803 <i>P. caesiopruinosa</i> , 6809 <i>P. subcinerea</i> should be combined into 6809 <i>P. subcinerea</i> . ACTION 4: For any analysis when Southern (S) FIA Region is included - for analyzing pre-2000 data, 6801 <i>Pyxine albobirens</i> , 6803 <i>P. caesiopruinosa</i> , 6809 <i>P. subcinerea</i> should be combined into 6809 <i>P. subcinerea</i> . Eastern US: The names 6801 <i>P. albobirens</i> , 6803 <i>P. caesiopruinosa</i> , and 6809 <i>P. subcinerea</i> may have been misapplied in early years in the SE. See Amtoft 2002 for a key to UV+ <i>Pyxine</i> in the East. 6801 <i>P. albobirens</i> should have a K+ purple medulla that is orange and 'round, laminal soralia'; found in the SE coastal plain.
6803	<i>Pyxine caesiopruinosa</i>	ACTION 7. ACTION 3: For any analysis where Southern (S) FIA Region is included - for analyzing data from multiple years crossing 1999, 6801 <i>Pyxine albobirens</i> , 6803 <i>P. caesiopruinosa</i> , 6809 <i>P. subcinerea</i> should be combined into 6809 <i>P. subcinerea</i> . ACTION 4: For any analysis when Southern (S) FIA Region is included - for analyzing pre-2000 data, 6801 <i>Pyxine albobirens</i> , 6803 <i>P. caesiopruinosa</i> , 6809 <i>P. subcinerea</i> should be combined into 6809 <i>P. subcinerea</i> . Eastern US: The names 6801 <i>P. albobirens</i> , 6803 <i>P. caesiopruinosa</i> , and 6809 <i>P. subcinerea</i> may have been misapplied in early years in the SE. See Amtoft 2002 for a key to UV+ <i>Pyxine</i> in the East. 6803 <i>P. caesiopruinosa</i> should have a K+ purple medulla that is orange and 'marginal dactyls and coarse soredia'; found in the SE coastal plain.
6809	<i>Pyxine subcinerea</i>	ACTION 7. ACTION 3: For any analysis where Southern (S) FIA Region is included - for analyzing data from multiple years crossing 1999, 6801 <i>Pyxine albobirens</i> , 6803 <i>P. caesiopruinosa</i> , 6809 <i>P. subcinerea</i> should be combined into 6809 <i>P. subcinerea</i> . ACTION 4: For any analysis when Southern (S) FIA Region is included - for analyzing pre-2000 data, 6801 <i>Pyxine albobirens</i> , 6803 <i>P. caesiopruinosa</i> , 6809 <i>P. subcinerea</i> should be combined into 6809 <i>P. subcinerea</i> . Eastern US: The names 6801 <i>P. albobirens</i> , 6803 <i>P. caesiopruinosa</i> , and 6809 <i>P. subcinerea</i> may have been misapplied in early years in the SE. See Amtoft 2002 for a key to UV+ <i>Pyxine</i> in the East. 6809 <i>P. subcinerea</i> should have a K- medulla that is yellow.

6901	<i>Ramalina americana</i>	ACTION 0. LaGreca (1999) segregated <i>Ramalina culbersoniorum</i> from <i>R. americana</i> . It does not appear possible to distinguish the two taxa without TLC; taxa identified as 6901 <i>R. americana</i> may contain specimens of <i>R. culbersoniorum</i> .
6912	<i>Ramalina farinacea</i>	ACTION 0. Western US: This name may have been misapplied on occasion to pollution-stunted or tiny specimens of 6934 <i>Ramalina subleptocarpha</i> , an unavoidable situation as they become convergent when stressed.
6934	<i>Ramalina subleptocarpha</i>	ACTION 0. Western US: This taxon may, on occasion, have been called 6912 <i>Ramalina farinacea</i> if it occurred as a pollution stressed or tiny form which was indistinguishable from that taxon.
7100	<i>Rimelia</i>	ACTION 0. Though <i>Rimelia</i> has been synonymized under <i>Parmotrema</i> (Blanco, et al 2005), we are retaining it at this time.
7101	<i>Rimelia cetrata</i>	ACTION 2: 5338 <i>Parmotrema cetratum</i> should be combined into 7101 <i>Rimelia cetrata</i> for all analyses. Both codes have been used in data. 7101 <i>R. cetrata</i> is preferred.
7106	<i>Rimelia subsidiosa</i>	ACTION 2: 5337 <i>Parmotrema subsidiosum</i> should be combined into 7106 <i>Rimelia subsidiosa</i> for all analyses. Both codes have been used in the data. 7106 <i>R. subsidiosa</i> is preferred.
7501	<i>Sticta beauvoisii</i>	ACTION 6: ACTION 2: 7505 <i>Sticta weigeli</i> should be combined into 7501 <i>S. beauvoisii</i> for all analyses. ACTION 3: For analyzing data from multiple years crossing 2004, 7505 <i>S. carolinensis</i> , and 7508 <i>S. fragilinata</i> should be combined into 7501 <i>S. beauvoisii</i> . This name replaces 7505 <i>S. weigeli</i> from 1998 data on, for similar specimens. 7505 <i>S. weigeli</i> is considered a misidentification for North America (Esslinger 1997). 7501 <i>S. beauvoisii</i> is an appropriate name for eastern specimens, but may eventually be superseded for western specimens. In 2004 data, 7507 <i>S. carolinensis</i> and 7508 <i>S. fragilinata</i> were segregated from 7501 <i>S. beauvoisii</i> .
7507	<i>Sticta carolinensis</i>	ACTION 3: For analyzing data from multiple years crossing 2004, 7505 <i>Sticta carolinensis</i> , and 7508 <i>S. fragilinata</i> should be combined into 7501 <i>S. beauvoisii</i> . Segregated in 2004 from 7501 <i>S. beauvoisii</i> , by having phyllidiate isidia (McDonald et al. 2003). It differs from 7508 <i>S. fragilinata</i> in having smaller cyphellae with a white basal membrane and in having no secondary metabolites.
7508	<i>Sticta fragilinata</i>	ACTION 3: For analyzing data from multiple years crossing 2004, 7505 <i>Sticta carolinensis</i> , and 7508 <i>S. fragilinata</i> should be combined into 7501 <i>S. beauvoisii</i> . Segregated in 2004 from 7501 <i>S. beauvoisii</i> and similar to 7507 <i>S. carolinensis</i> , but with secondary metabolites in the medulla (McDonald et al. 2003).
7505	<i>Sticta weigeli</i>	ACTION 2: 7505 <i>Sticta weigeli</i> should be combined into 7501 <i>S. beauvoisii</i> for all analyses. 7505 <i>S. weigeli</i> = 7501 <i>S. beauvoisii</i> for 1998 and later identifications of similar specimens. See the latter for additional notes.
7920	<i>Tuckermanella</i>	ACTION 0. In contrast to other <i>Cetraria</i> segregate genus names not used in FIA, this genus name is used because two species have been described only in <i>Tuckermanella</i> (Esslinger in Mycotaxon 85).
1007	<i>Tuckermanella coralligera</i>	ACTION 0. <i>Tuckermanella coralligera</i> = <i>Cetraria coralligera</i> ; it retains the same code and acronym as the latter name.

8000	<i>Usnea</i>	<p>ACTION 6: ACTION 3: For analyzing data from multiple years crossing 2000, 8023 <i>U. diplotypus</i> should be combined into 8000 <i>Usnea</i>. ACTION 4: For analyzing pre-2000 data, 8023 <i>Usnea diplotypus</i> should be combined into 8000 <i>Usnea</i>. ACTION 5: ACTION 3: West - for analyzing data from multiple years crossing 2000, 8014 <i>Usnea ceratina</i> should be combined into 8000 <i>Usnea</i>. ACTION 0: East. This taxon was used broadly to include all specimens which could not be positively identified to species.</p>
8014	<i>Usnea ceratina</i>	<p>ACTION 5: ACTION 3: West - for analyzing data from multiple years crossing 2000, 8014 <i>Usnea ceratina</i> should be combined into 8000 <i>Usnea</i>. ACTION 0: East. This name was always applied in the East and was first applied in the West in 2000 data. In the West it was most likely classified in previous years as <i>Usnea</i> sp.</p>
8087	<i>Usnea chaetophora</i>	<p>ACTION 3: For analyzing data from multiple years crossing 1998, 8087 <i>Usnea chaetophora</i> should be combined into 8029 <i>U. filipendula</i>. In the western US, this taxon represents part of the <i>U. filipendula</i> group, which includes <i>U. plicata</i> and several others. This name began to be applied widely in the western US in 1998 data. This species group replaces the old (pre-1998) taxon <i>U. plicata</i>.</p>
8023	<i>Usnea diplotypus</i>	<p>ACTION 6: ACTION 3: For analyzing data from multiple years crossing 2000, 8023 <i>U. diplotypus</i> should be combined into 8000 <i>Usnea</i>. ACTION 4: For analyzing pre-2000 data, 8023 <i>Usnea diplotypus</i> should be combined into 8000 <i>Usnea</i>. This species was used widely in PNW and CA 1998-99 as per concepts in McCune and Geiser, 1997 (Macrolichens of the Pacific Northwest). In 2000, based on considerable progress in <i>Usnea</i>, this name was considered to be incorrectly applied in previous years, The name and code 8023 <i>U. diplotypus</i> should only be used for specimens identified with TLC.</p>
8088	<i>Usnea esperantiana</i>	<p>ACTION 3: For analyzing data from multiple years crossing 2000, 8088 <i>Usnea esperantiana</i> should be combined into 8036 <i>U. glabrata</i>. This taxon was first applied in 2000 in the west. It is a recognizable syndrome, but possibly intergrades with 8036 <i>U. glabrata</i></p>
8029	<i>Usnea filipendula</i>	<p>ACTION 6: ACTION 2: 8058 <i>Usnea plicata</i> should be combined into 8029 <i>U. filipendula</i>. ACTION 3: For analyzing data from multiple years crossing 1998, 8087 <i>U. chaetophora</i> should be combined into 8029 <i>U. filipendula</i>. In the western US, this taxon represents the <i>U. filipendula</i> group, which includes <i>U. plicata</i>, <i>U. chaetophora</i> and several others. This name began to be applied widely in the western US in 1998 data. This species group replaces the old (pre-1998) taxon <i>U. plicata</i>.</p>
8032	<i>Usnea fragilescens</i>	<p>ACTION 0. This taxon was first applied in 2000 in the west. It is very close to <i>Usnea cornuta</i> in some material, and some material classified as that taxon in prior years may actually be this species.</p>
8034	<i>Usnea fulvorenans</i>	<p>ACTION 2: 8034 <i>Usnea fulvorenans</i> should be combined into 8037 <i>U. glabrescens</i> for analysis. This taxon would be impossible to distinguish from <i>U. glabrescens</i> without TLC and should be considered a synonym.</p>
8036	<i>Usnea glabrata</i>	<p>ACTION 3: For analyzing data from multiple years crossing 2000, 8088 <i>Usnea esperantiana</i> should be combined into 8036 <i>U. glabrata</i>. 8088 <i>U. esperantiana</i> possibly intergrades with 8036 <i>U. glabrata</i>.</p>

8037	<i>Usnea glabrescens</i>	ACTION 2: 8034 <i>Usnea fulvoreagens</i> should be combined into 8037 <i>U. glabrescens</i> for analysis. This name was first used in 1999 in the west. Previous material classed as 8000 <i>Usnea sp.</i> may include this taxon. It cannot be distinguished from 8034 <i>U. fulvoreagens</i> without TLC and should be considered a synonym for the purposes of this program.
8044	<i>Usnea lapponica</i>	ACTION 0. In the western US, this name has been used in the broad sense, including all specimens that were papillate, tufted, and had soredia erupting through concave craters in the cortex, with reflexed edges, and soralia often surrounding the central cord.
8047	<i>Usnea madeirensis</i>	ACTION 0. 8047 <i>Usnea madeirensis</i> = 8047 <i>Usnea silesiaca</i> The latter name was used starting with 2005 data.
8058	<i>Usnea plicata</i>	ACTION 2: 8058 <i>Usnea plicata</i> should be combined into 8029 <i>U. filipendula</i> for analysis. Starting in 1998, this aggregate (mostly West) has been included in the broader aggregate 8029 <i>U. filipendula</i> ; the name 8058 <i>U. plicata</i> is no longer used in FIA as it is nomenclaturally ambiguous.
8047	<i>Usnea silesiaca</i>	ACTION 0. 8047 <i>Usnea madeirensis</i> = 8047 <i>Usnea silesiaca</i> The latter name was used starting with 2005 data.
8072	<i>Usnea subfloridana</i>	ACTION 0. In Colorado 1992-1996, and in the Pacific Northwest region 1994, this name was used in the broad sense, including all specimens that were papillate, tufted, and had isidia. Starting with 1998 data, this taxon was applied sensu stricto. In the East for 1993-1997 data, this name was used for all specimens that were papillate, tufted, and had both soredia and isidia, the isidia projecting from the soralia. Starting with 1998 data, this taxon was applied sensu stricto after the concepts of Halonen et al. (1998, Bryologist 101:36-60), to the extent that chemotypes can be distinguished with spot tests alone.
8151	<i>Vulpicida canadensis</i>	ACTION 2: 8151 <i>Vulpicida canadensis</i> should be combined into 1004 <i>Cetraria canadensis</i> for all analyses. 1004 <i>Cetraria canadensis</i> = 8151 <i>Vulpicida canadensis</i> . Both names need to remain in the master list; data have been coded with one or the other name (but not both). For FIA data the former name is preferred.
8152	<i>Vulpicida pinastri</i>	ACTION 2: 8152 <i>Vulpicida pinastri</i> should be combined into 1015 <i>Cetraria pinastri</i> for all analyses. 1015 <i>Cetraria pinastri</i> = 8152 <i>Vulpicida pinastri</i> . Both names need to remain in the master list; data have been coded with one or the other name (but not both). For FIA data the former name is preferred.
8153	<i>Vulpicida viridis</i>	ACTION 2: 8153 <i>Vulpicida viridis</i> should be combined into 1020 <i>Cetraria viridis</i> for all analyses. 1020 <i>Cetraria viridis</i> = 8153 <i>Vulpicida viridis</i> . The latter is now the most current name, but both names need to remain in the master list; data have been coded with one or the other name (but not both).
100	<i>Waynea</i>	ACTION 1: Exclude for most FIA analysis. Squamulose growth form included in some data. This has been collected inconsistently and not included in data for most years. If it appears in a packet, it is recorded on the ID sheet but not entered in the data files.
101	<i>Waynea californica</i>	ACTION 1: Exclude for most FIA analysis. Squamulose growth form included in some data. This has been collected inconsistently and not included in data for most years. If it appears in a packet, it is recorded on the ID sheet but not entered in the data files.

8170	<i>Xanthomendoza</i>	ACTION 2: For analysis 8170 <i>Xanthomendoza</i> should be combined into 8200 <i>Xanthoria</i> . Before 2004 data, 8170 <i>Xanthomendoza</i> sp. would have been placed under 8200 <i>Xanthoria</i> sp. Specimens that cannot be identified to species are coded 8200 <i>Xanthoria</i> unless the ID specialist is certain they belong to 8170 <i>Xanthomendoza</i> sp.
8211	<i>Xanthomendoza borealis</i>	ACTION 0. 8211 <i>Xanthoria borealis</i> = 8211 <i>Xanthomendoza borealis</i> The latter name was used starting with 2004 data.
8212	<i>Xanthomendoza concinna</i>	ACTION 0. 8212 <i>Xanthoria concinna</i> = 8212 <i>Xanthomendoza concinna</i> . The latter name was used starting with 2004 data.
8203	<i>Xanthomendoza fallax</i>	ACTION 3: For data analysis for multiple years crossing 1997, 8210 <i>Xanthomendoza fulva</i> , 8219 <i>X. galericulata</i> , 8213 <i>X. mendozae</i> , 8215 <i>X. oregana</i> , and 8218 <i>X. ulophyllodes</i> should be combined into 8203 <i>X. fallax</i> . 8203 <i>Xanthoria fallax</i> = 8203 <i>Xanthomendoza fallax</i> . The latter name was used starting with 2004 data. <i>Xanthoria fallax</i> was applied broadly prior to Lindblom (1997). Starting with 1997 data, Lindblom's much narrower concept of <i>X. fallax</i> was applied. Western US: Before 1997, 8210 <i>X. fulva</i> , 8213 <i>X. mendozae</i> , 8215 <i>X. oregana</i> , and 8218 <i>X. ulophyllodes</i> were mostly included in the concept of 8203 <i>X. fallax</i> . In most western states 8210 <i>X. fulva</i> is common, so pre-1995 8203 <i>X. fallax</i> probably includes many specimens of 8210 <i>X. fulva</i> . Colorado 1992-1996 8203 <i>X. fallax</i> were re-examined; only a few were found to be 8210 <i>X. fulva</i> and no pre-1997 data entries were changed. Eastern US: 8210 <i>X. fulva</i> and 8218 <i>X. ulophyllodes</i> are moderately common, so pre-1997 <i>X. fallax</i> probably includes many specimens of 8210 <i>X. fulva</i> and 8218 <i>X. ulophyllodes</i> .
8210	<i>Xanthomendoza fulva</i>	ACTION 6. ACTION 3: For data analysis for multiple years crossing 1997, 8210 <i>Xanthomendoza fulva</i> , 8219 <i>X. galericulata</i> , 8213 <i>X. mendozae</i> , 8215 <i>X. oregana</i> , and 8218 <i>X. ulophyllodes</i> should be combined into 8203 <i>X. fallax</i> . ACTION 3: For data analysis for multiple years crossing 2004, 8219 <i>X. galericulata</i> should be combined into 8210 <i>X. fulva</i> . 8210 <i>Xanthoria fulva</i> = 8210 <i>Xanthomendoza fulva</i> The latter name was used starting with 2004 data. In pre-2004 data this taxon may have included 8219 <i>X. galericulata</i> (also see notes under 8215 <i>Xanthomendoza oregana</i>). Before 1997, 8210 <i>X. fulva</i> , if present, was mostly included with 8203 <i>X. fallax</i> . In 1997 and after, Lindblom's much narrower concept of 8203 <i>X. fallax</i> was applied and the name 8210 <i>X. fulva</i> was used more frequently. Western US: In most western states 8210 <i>X. fulva</i> is common, so pre-1997 8203 <i>X. fallax</i> probably includes many specimens of 8210 <i>X. fulva</i> . Colorado 1992-1996 8203 <i>X. fallax</i> were re-examined; only a few were found to be 8210 <i>X. fulva</i> and no pre-1997 data entries were changed. Eastern US: 8210 <i>X. fulva</i> specimens are moderately common, so pre-1995 8203 <i>X. fallax</i> probably includes many specimens of 8210 <i>X. fulva</i> .
8219	<i>Xanthomendoza galericulata</i>	ACTION 6: ACTION 3: For data analysis for multiple years crossing 1997, 8210 <i>Xanthomendoza fulva</i> , 8219 <i>X. galericulata</i> , 8213 <i>X. mendozae</i> , 8215 <i>X. oregana</i> , and 8218 <i>X. ulophyllodes</i> should be combined into 8203 <i>X. fallax</i> . ACTION 3: For data analysis for multiple years crossing 2004, 8219 <i>X. galericulata</i> should be combined into 8210 <i>X. fulva</i> . This is a distinct species included in Nash et al. (2004...Sonoran Desert, v2) and Lindblom 2006. It differs from 8210 <i>X. fulva</i> and 8215 <i>X. oregana</i> in having soredia produced from the underside of hood-like or helmet-shaped lobe tips. At this time we have no recommendation for how to compare with pre-2004 data.

8204	<i>Xanthomendoza hasseana</i>	<p>ACTION 5: ACTION 3: West – for data analysis for multiple years crossing 1997, 8204 <i>Xanthomendoza hasseana</i> and 8214 <i>X. montana</i> should be combined into 8207 <i>Xanthoria polycarpa</i> group. ACTION 3: East – for data analysis for multiple years crossing 1997, 8207 <i>X. polycarpa</i> should be combined into 8204 <i>X. hasseana</i>. 8204 <i>Xanthoria hasseana</i> = 8204 <i>Xanthomendoza hasseana</i> The latter name was used starting with 2004 data. Western US: 8207 <i>X. polycarpa</i> was applied broadly prior to Lindblom (1997) and included 8204 <i>X. hasseana</i> in 1996 data and before. 8204 <i>X. hasseana</i> was applied starting with 1997 data. Separation of 8214 <i>X. montana</i> from 8204 <i>X. hasseana</i> requires a spore test via light microscope, not routinely done for FIA. Based on known geographic ranges, all specimens in the PNW region are assigned to 8204 <i>X. hasseana</i> and in the IW region, all specimens are assigned to 8214 <i>X. montana</i>. Eastern US: 8207 <i>X. polycarpa</i> for pre-1997 data is almost all the same taxon as 8204 <i>X. hasseana</i>, which is the name used starting with 1997 data.</p>
8213	<i>Xanthomendoza mendozae</i>	<p>ACTION 3: For data analysis for multiple years crossing 1997, 8210 <i>Xanthomendoza fulva</i>, 8219 <i>X. galericulata</i>, 8213 <i>X. mendozae</i>, 8215 <i>X. oregana</i>, and 8218 <i>X. ulophyllodes</i> should be combined into 8203 <i>X. fallax</i>. 8213 <i>Xanthoria mendozae</i> = 8213 <i>Xanthomendoza mendozae</i> The latter name was used starting with 2005 data.</p>
8214	<i>Xanthomendoza montana</i>	<p>ACTION 5: ACTION 3: West – for data analysis for multiple years crossing 1997, 8204 <i>Xanthomendoza hasseana</i> and 8214 <i>X. montana</i> should be combined into 8207 <i>Xanthoria polycarpa</i> group. ACTION 0: East. 8214 <i>Xanthoria montana</i> = 8214 <i>Xanthomendoza montana</i> The latter name was used starting with 2004 data. Western US: 8207 <i>X. polycarpa</i> was applied broadly prior to Lindblom (1997) and included 8214 <i>X. montana</i> in 1996 data and before. 8214 <i>X. montana</i> was applied starting with 1997 data. Separation of 8214 <i>X. montana</i> from 8204 <i>X. hasseana</i> requires a spore test via light microscope, not routinely done for FIA. Based on known geographic ranges, all specimens in the PNW region are assigned to 8204 <i>X. hasseana</i> and in the IW region, all specimens are assigned to 8214 <i>X. montana</i>. Colorado 1992-1996 specimens were examined and reassigned to 8214 <i>X. montana</i>.</p>
8215	<i>Xanthomendoza oregana</i>	<p>ACTION 3: For data analysis for multiple years crossing 1997, 8210 <i>Xanthomendoza fulva</i>, 8219 <i>X. galericulata</i>, 8213 <i>X. mendozae</i>, 8215 <i>X. oregana</i>, and 8218 <i>X. ulophyllodes</i> should be combined into 8203 <i>X. fallax</i>. 8215 <i>Xanthoria oregana</i> = 8215 <i>Xanthomendoza oregana</i> The latter name was used starting with 2004 data In pre-2004 data this taxon may have included 8219 <i>X. galericulata</i> (also see notes under 8210 <i>X. fulva</i>). Western US: This taxon was distinguished starting with 1997 data. In prior years, if present it was included with 8203 <i>X. fallax</i>, which was broadly applied.</p>
8209	<i>Xanthomendoza subramulosa</i>	<p>ACTION 0. 8209 <i>Xanthoria subramulosa</i> = 8209 <i>Xanthomendoza subramulosa</i> The latter name was used starting with 2004 data.</p>

8218	<i>Xanthomendoza ulophyllodes</i>	<p>ACTION 3: For data analysis for multiple years crossing 1997, 8210 <i>Xanthomendoza fulva</i>, 8219 <i>X. galericulata</i>, 8213 <i>X. mendozae</i>, 8215 <i>X. oregana</i>, and 8218 <i>X. ulophyllodes</i> should be combined into 8203 <i>X. fallax</i>.</p> <p>8218 <i>Xanthoria ulophyllodes</i> = 8218 <i>Xanthomendoza ulophyllodes</i> The latter name was used starting with 2004 data. Before 1997 data, 8218 <i>X. ulophyllodes</i> was included with 8203 <i>X. fallax</i>. Starting with 1997 data, Lindblom's much narrower concept of 8203 <i>X. fallax</i> was applied and the name 8218 <i>X. ulophyllodes</i> was used.</p> <p>Western US: This species is uncommon; it would have been included with 8203 <i>X. fallax</i> for pre-1997 data if present. Starting with 1997 data it has been recorded using Lindblom's concepts.</p> <p>Eastern US: 8218 <i>X. ulophyllodes</i> is moderately common, so pre-1997 8203 <i>X. fallax</i> probably includes many specimens of the former species.</p>
8200	<i>Xanthoria</i>	<p>ACTION 2: For analysis 8170 <i>Xanthomendoza</i> should be combined into 8200 <i>Xanthoria</i>. Before 2004 data, 8170 <i>Xanthomendoza</i> sp. would have been placed under 8200 <i>Xanthoria</i> sp. Specimens that cannot be identified to species are coded 8200 <i>Xanthoria</i> unless the ID specialist is certain they belong to 8170 <i>Xanthomendoza</i> sp.</p>
8211	<i>Xanthoria borealis</i>	<p>ACTION 0.</p> <p>8211 <i>Xanthoria borealis</i> = 8211 <i>Xanthomendoza borealis</i> The latter name was used starting with 2004 data.</p>
8212	<i>Xanthoria concinna</i>	<p>ACTION 0.</p> <p>8212 <i>Xanthoria concinna</i> = 8212 <i>Xanthomendoza concinna</i> The latter name was used starting with 2004 data.</p>
8201	<i>Xanthoria candelaria</i>	<p>ACTION 0.</p> <p><i>Xanthoria candelaria</i> has been used in the restricted sense of Lindblom (1997).</p>
8203	<i>Xanthoria fallax</i>	<p>ACTION 3: For data analysis for multiple years crossing 1997, 8210 <i>Xanthomendoza fulva</i>, 8219 <i>X. galericulata</i>, 8213 <i>X. mendozae</i>, 8215 <i>X. oregana</i>, and 8218 <i>X. ulophyllodes</i> should be combined into 8203 <i>X. fallax</i>.</p> <p>8203 <i>Xanthoria fallax</i> = 8203 <i>Xanthomendoza fallax</i> The latter name was used starting with 2004 data. See the latter for additional notes.</p>
8210	<i>Xanthoria fulva</i>	<p>ACTION 6:</p> <p>ACTION 3: For data analysis for multiple years crossing 1997, 8210 <i>Xanthomendoza fulva</i>, 8219 <i>X. galericulata</i>, 8213 <i>X. mendozae</i>, 8215 <i>X. oregana</i>, and 8218 <i>X. ulophyllodes</i> should be combined into 8203 <i>X. fallax</i>.</p> <p>ACTION 3: For data analysis for multiple years crossing 2004, 8219 <i>X. galericulata</i> should be combined into 8210 <i>X. fulva</i>.</p> <p>8210 <i>Xanthoria fulva</i> = 8210 <i>Xanthomendoza fulva</i> The latter name was used starting with 2004 data. See the latter for additional notes.</p>
8204	<i>Xanthoria hasseana</i>	<p>ACTION 5:</p> <p>ACTION 3: West – for data analysis for multiple years crossing 1997, 8204 <i>Xanthomendoza hasseana</i> and 8214 <i>X. montana</i> should be combined into 8207 <i>Xanthoria polycarpa</i> group.</p> <p>ACTION 3: East – for data analysis for multiple years crossing 1997, 8207 <i>X. polycarpa</i> should be combined into 8204 <i>X. hasseana</i>.</p> <p>8204 <i>Xanthoria hasseana</i> = 8204 <i>Xanthomendoza hasseana</i> The latter name was used starting with 2004 data. See the latter for additional notes.</p>
8213	<i>Xanthoria mendozae</i>	<p>ACTION 3: For data analysis for multiple years crossing 1997, 8210 <i>Xanthomendoza fulva</i>, 8219 <i>X. galericulata</i>, 8213 <i>X. mendozae</i>, 8215 <i>X. oregana</i>, and 8218 <i>X. ulophyllodes</i> should be combined into 8203 <i>X. fallax</i>.</p> <p>8213 <i>Xanthoria mendozae</i> = 8213 <i>Xanthomendoza mendozae</i> The latter name was used starting with 2005 data.</p>

8214	<i>Xanthoria montana</i>	<p>ACTION 5: ACTION 3: West – for data analysis for multiple years crossing 1997, 8204 <i>Xanthomendoza hasseana</i> and 8214 <i>X. montana</i> should be combined into 8207 <i>Xanthoria polycarpa</i> group. ACTION 0: East. 8214 <i>Xanthoria montana</i> = 8214 <i>Xanthomendoza montana</i> The latter name was used starting with 2004 data. See the latter for additional notes.</p>
8215	<i>Xanthoria oregana</i>	<p>ACTION 3: For data analysis for multiple years crossing 1997, 8210 <i>Xanthomendoza fulva</i>, 8219 <i>X. galericulata</i>, 8213 <i>X. mendozae</i>, 8215 <i>X. oregana</i>, and 8218 <i>X. ulophyllodes</i> should be combined into 8203 <i>X. fallax</i>. 8215 <i>Xanthoria oregana</i> = 8215 <i>Xanthomendoza oregana</i> The latter name was used starting with 2004 data. See the latter for additional notes.</p>
8207	<i>Xanthoria polycarpa</i>	<p>ACTION 5: ACTION 3: West – for data analysis for multiple years crossing 1997, 8204 <i>Xanthomendoza hasseana</i> and 8214 <i>X. montana</i> should be combined into 8207 <i>Xanthoria polycarpa</i> group. ACTION 3: East – for data analysis for multiple years crossing 1997, 8207 <i>X. polycarpa</i> should be combined into 8204 <i>X. hasseana</i>. 8207 <i>X. polycarpa</i> was applied broadly prior to Lindblom (1997). Starting with 1997 data, 8207 <i>X. polycarpa</i> has been applied much more narrowly. Western US: Prior to 1997, this taxon may have included 8207 <i>X. polycarpa</i>, 8214 <i>X. montana</i>, 8204 <i>X. hasseana</i>, and 8213 <i>X. mendozae</i>. Colorado 1992-1996 specimens were examined and reassigned to 8214 <i>X. montana</i>. Also see notes for 8214 <i>X. montana</i> and 8204 <i>X. hasseana</i>. Eastern US: 8207 <i>X. polycarpa</i> for pre-1997 data is almost all the same taxon as 8204 <i>X. hasseana</i>, the name used for 1997 and later data.</p>
8209	<i>Xanthoria subramulosa</i>	<p>ACTION 0. 8209 <i>Xanthoria subramulosa</i> = 8209 <i>Xanthomendoza subramulosa</i> The latter name was used starting with 2004 data.</p>
8218	<i>Xanthoria ulophyllodes</i>	<p>ACTION 3: For data analysis for multiple years crossing 1997, 8210 <i>Xanthomendoza fulva</i>, 8219 <i>X. galericulata</i>, 8213 <i>X. mendozae</i>, 8215 <i>X. oregana</i>, and 8218 <i>X. ulophyllodes</i> should be combined into 8203 <i>X. fallax</i>. 8218 <i>Xanthoria ulophyllodes</i> = 8218 <i>Xanthomendoza ulophyllodes</i> The latter name was used starting with 2004 data. See the latter for additional notes.</p>