Antarctic Treaty

Electronic Information Exchange System

Party: Brazil

2014/2015 Annual Information

Operational Information – Non Governmental Expeditions - Vessel-Based Operations

No new information have been provided during the reported period.

Operational Information – Non Governmental Expeditions - Land-Based Operations

No new information have been provided during the reported period.

Environmental Information - Area Protection and Management (Permit, Visit and Activities)

ASPA / ASMA:	**Type:** ASPA **Number:** 128 **Name:** Western shores of Admiralty Bay, King George Island, South Shetland Islands (More Details)
Permit Number:	
Number of people:	**Permitted to enter:** 12 **That actually entered:** 9
Permit Period:	**From:** 01 Dec 2014 **To:** 30 Jan 2015
Purpose:	Characterize the fungal communities present in different substrates of Antarctica to increase the knowledge about their diversity and biotechnological application
Summary of activities:	The study included collect of soils, rocks, snow water of lakes, and plants to isolate fungi. Soils (2 kg), rocks (2 kg), water of lakes (10 L), plants (10 specimens). The samples were collected across the ASPA 128.
Event or project name/number:	MycoAntar: Taxonomy, diversity and geographic distribution of fungi present in Antarctica and its

ASPA / ASMA:	**Type:** ASPA **Number:** 128 **Name:** Western shores of Admiralty Bay, King George Island, South Shetland Islands (More Details)
Permit Number:	
Number of people:	**Permitted to enter:** 8 **That actually entered:** 2
Permit Period:	**From:** 06 Feb 2015 **To:** 22 Feb 2015
Purpose:	1) Test the hypothesis Holarctic origin of the target species with posterior dispersal to the south, focusing specially on the "American Pathway". 2) Understand the importance of the Neotropics on the dispersal processes of bipolar species to Western Antarctica and consequently to Antarctic colonization. 3) Compare the genetic diversity among mosses and lichens with similar distribution pattern. 4) Compare the morphological and genetic diversity in bipolar mosses and lichens. 5) Identify, using molecular markers, if there are cryptic species or speciation processes occurring. 6) Use molecular markers to check if the molecular diversity found among bipolar populations is reflected on its geographical distribution. 7) Increase our understanding of which factors plays a major role in dispersal and colonization between Antarctica and South America.
Summary of activities:	Collection of botanical specimens: lichenized fungi and bryophytes. Field trips were made near the Polish Polar Station Henryk Arctowski. We collected 80 samples of lichenized fungi and bryophytes in an area about 16,8 km2, centered in the point 62º11'50'' S, 58º27'40''W. The collections were make in the points: 62º09'49,8'' S, 58º27'51,6''W (Penguin Ridge); 62º09'50,4'' S, 58º28'22,8''W (Rochas Krokiew); 62º09'30,24'' S, 58º28'50,4''W (Panorama Ridge) and 62º09'30'' S, 58º28'51''W (Skua Cliff).
Event or project name/number:	Evolution and Dispersal of Antarctic Bipolar species of Mosses and Lichens

ASPA / ASMA:	**Type:** ASPA **Number:** 128 **Name:** Western shores of Admiralty Bay, King George Island, South Shetland Islands (More Details)
Permit Number:	
Number of people:	**Permitted to enter:** 8 **That actually entered:** 6
Permit Period:	**From:** 07 Jan 2015 **To:** 07 Jan 2015
Purpose:	1. To perform continuous monitoring on diversity of Chlorophytes, Rhodophytes, and Phaeophyceae, using morphoanatomical features and molecular approaches, having as priority on infralittoral samplings, alien species or taxa geographical distribution changes, mainly at sensible areas showing high vessels frequency, including tourism. 2. Detect photossinthetic parameters of conspicuous species 3. To document chemical extracts obtained from conspicuous seaweeds. 4. Isolate strategic chemical coumpounds for aclimatation of adverse conditions such as: Photossinthetic pigments, carotenoids, lipids (ômega 3 and 6), and phytoquelatins 3 and 4. 5. Study chemical composition of bioactive extracts: antioxidant potencial, leishmanicide, antitumoral, antiviral, reductor potencial. 6. To evaluate concentrations and types of micosporinas like-aminoacidos (MAA), absorbing substances of UV radiation, comparing with seaweeds from tropical zones. 7. Associated distribution and biomass of conspicuous seaweed with abiotic parameters. 8. Summer continuous monitoring of temperature, salinity, pH, dissolved oxygen, and UV radiation from sampling sites; 9. Analyze concentrations of heavy metals in the bottom sediments and also in some target macroalgae species; 10. Publishing teaching material regarding seaweeds species and marine fungi aiming to promote PROANTAR and introduce the polar research relevance in public high schools; 11. Trainee human resources through monographs, Master and Doctoral program. 12. Create a herbarium Antarctic collection 13. Establish a chemical extract collection
Summary of activities:	Thallus and or fronds of macroalgae were collected on intertidal zone aiming taxonomic, molecular and biochemical analysis. 6 specimens of each taxa aiming diversity and biochemical approches.

Event or project name/number:	Biodiversity, monitoring, survival strategies and bioprospection of extremofilous seaweeds along Mar

ASPA / ASMA:	**Type:** ASPA **Number:** 128 **Name:** Western shores of Admiralty Bay, King George Island, South Shetland Islands (More Details)
Permit Number:	
Number of people:	**Permitted to enter:** 7 **That actually entered:** 4
Permit Period:	**From:** 08 Jan 2015 **To:** 11 Jan 2015
Purpose:	1. To perform continuous monitoring on diversity of Chlorophytes, Rhodophytes, and Phaeophyceae, using morphoanatomical features and molecular approaches, having as priority on infralittoral samplings, alien species or taxa geographical distribution changes, mainly at sensible areas showing high vessels frequency, including tourism. 2. Detect photossinthetic parameters of conspicuous species 3. To document chemical extracts obtained from conspicuous seaweeds. 4. Isolate strategic chemical coumpounds for aclimatation of adverse conditions such as: Photossinthetic pigments, carotenoids, lipids (ômega 3 and 6), and phytoquelatins 3 and 4. 5. Study chemical composition of bioactive extracts: antioxidant potencial, leishmanicide, antitumoral, antiviral, reductor potencial. 6. To evaluate concentrations and types of micosporinas like-aminoacidos (MAA), absorbing substances of UV radiation, comparing with seaweeds from tropical zones. 7. Associated distribution and biomass of conspicuous seaweed with abiotic parameters. 8. Summer continuous monitoring of temperature, salinity, pH, dissolved oxygen, and UV radiation from sampling sites; 9. Analyze concentrations of heavy metals in the bottom sediments and also in some target macroalgae species; 10. Publishing teaching material regarding seaweeds species and marine fungi aiming to promote PROANTAR and introduce the polar research relevance in public high schools; 11. Trainee human resources through monographs, Master and Doctoral program. 12. Create a herbarium Antarctic collection 13. Establish a chemical extract collection
Summary of activities:	Thallus and or fronds of macroalgae were collected on intertidal zone aiming taxonomic, molecular and biochemical analysis. Demay Point - 6 specimens of each taxa aiming diversity and biochemical approches.
Event or project name/number:	Biodiversity, monitoring, survival strategies and bioprospection of extremofilous seaweeds along Mar

ASPA / ASMA:	**Type:** ASPA **Number:** 128 **Name:** Western shores of Admiralty Bay, King George Island, South Shetland Islands (More Details)
Permit Number:	
Number of people:	**Permitted to enter:** 5 **That actually entered:** 4
Permit Period:	**From:** 12 Mar 2015 **To:** 12 Mar 2015
Purpose:	- Conduct the phytosociological studies to locate the different vegetation occurring in the study area, assessing trends and the occurrence of environmental impacts caused by phenomena natural or by human action. - Describe the plant formations and associations, based mainly on vegetation cover and species lists. - Determine the abundance, diversity and identity of microorganisms (bacteria, archaea and fungi) that live in the studied areas. - Relate the plant and microbial communities of the region with the bird colonies, which are important data in the impact assessment environment, being indicative of the presence of birds. - To assess the genetic diversity of plant species of Maritime Antarctic to understanding of the phylogeographical relationship of Polytrichum moss species in order to understand the dynamics of populations of Subantarctic and bipolar species.
Summary of activities:	Collect small samples of Deschampsia antarctica (grass) and Sanionia uncinat (moss) near the colonies of petrel and pingüin. The area has no more birds in the colony when the work was done, it had completed the reproductive period cycle. The samples of Deschampsia antarctica and Sanionia uncinata were obtained in points 62 10 '32.7 "-58 27' 05.9"; 62 10 '32.2 "-58 27' 05.9 'and 62 10' 32.7" -58 27 '03.8", Located at one, five and ten meters from the border of colony.
Event or project name/number:	Plant communities from ice-free areas of Antarctica

ASPA / ASMA:	**Type:** ASPA **Number:** 133 **Name:** Harmony Point, Nelson Island, South Shetland Islands (More Details)
Permit Number:	
Number of people:	**Permitted to enter:** 10 **That actually entered:** 2
Permit Period:	**From:** 13 Jan 2015 **To:** 13 Jan 2015
Purpose:	1) Test the hypothesis Holarctic origin of the target species with posterior dispersal to the south, focusing specially on the "American Pathway". 2) Understand the importance of the Neotropics on the dispersal processes of bipolar species to Western Antarctica and consequently to Antarctic colonization. 3) Compare the genetic diversity among mosses and lichens with similar distribution pattern. 4) Compare the morphological and genetic diversity in bipolar mosses and lichens. 5) Identify, using molecular markers, if there are cryptic species or speciation processes occurring. 6) Use molecular markers to check if the molecular diversity found among bipolar populations is reflected on its geographical distribution. 7) Increase our understanding of which factors plays a major role in dispersal and colonization between Antarctica and South America.
Summary of activities:	Were collected samples of bryophytes and lichenes: - Lichens: 30 samples (Enseada Harmony, S 62°18'22.3" e W 059°11'55.3") - Bryophytes: 20 samples (Localidade: Enseada Harmony, S 62,30742 W 59,20041)
Event or project name/number:	Evolution and Dispersal of Antarctic Bipolar species of Mosses and Lichens

ASPA / ASMA:	**Type:** ASPA **Number:** 140 **Name:** Parts of Deception Island, South Shetland Islands (More Details)
Permit Number:	
Number of people:	**Permitted to enter:** 8 **That actually entered:** 6
Permit Period:	**From:** 09 Jan 2015 **To:** 10 Jan 2015
Purpose:	1. To perform continuous monitoring on diversity of Chlorophytes, Rhodophytes, and Phaeophyceae, using morphoanatomical features and molecular approaches, having as priority on infralittoral samplings, alien species or taxa geographical distribution changes, mainly at sensible areas showing high vessels frequency, including tourism. 2. Detect photossinthetic parameters of conspicuous species 3. To document chemical extracts obtained from conspicuous seaweeds. 4. Isolate strategic chemical coumpounds for aclimatation of adverse conditions such as: Photossinthetic pigments, carotenoids, lipids (ômega 3 and 6), and phytoquelatins 3 and 4. 5. Study chemical composition of bioactive extracts: antioxidant potencial, leishmanicide, antitumoral, antiviral, reductor potencial. 6. To evaluate concentrations and types of micosporinas like-aminoacidos (MAA), absorbing substances of UV radiation, comparing with seaweeds from tropical zones. 7. Associated distribution and biomass of conspicuous seaweed with abiotic parameters. 8. Summer continuous monitoring of temperature, salinity, pH, dissolved oxygen, and UV radiation from sampling sites; 9. Analyze concentrations of heavy metals in the bottom sediments and also in some target macroalgae species; 10. Publishing teaching material regarding seaweeds species and marine fungi aiming to promote PROANTAR and introduce the polar research relevance in public high schools; 11. Trainee human resources through monographs, Master and Doctoral program. 12. Create a herbarium

	Antarctic collection 13. Establish a chemical extract collection
Summary of activities:	Thallus and or fronds of macroalgae were collected on intertidal zone of Whalers Bay, and Fumarole Bay, aiming taxonomic, molecular and biochemical analysis. Fumarole Bay: 6 specimens of the unique species found (Palmaria decipiens) aiming biochemical approches. Whalers Bay: 6 specimens of each taxa aiming diversity and biochemical approches.
Event or project name/number:	Biodiversity, monitoring, survival strategies and bioprospection of extremofilous seaweeds along Mar

ASPA / ASMA:	**Type:** ASPA **Number:** 140 **Name:** Parts of Deception Island, South Shetland Islands (More Details)
Permit Number:	
Number of people:	**Permitted to enter:** 12 **That actually entered:** 9
Permit Period:	**From:** 01 Dec 2014 **To:** 30 Jan 2015
Purpose:	Characterize the fungal communities present in different substrates of Antarctica to increase the knowledge about their diversity and biotechnological application
Summary of activities:	The study included collect of soils, rocks, snow water of lakes, and plants to isolate fungi. Soils (2 kg), rocks (2 kg), water of lakes (10 L), plants (10 specimens). The samples were collected across the ASPA 140.
Event or project name/number:	MycoAntar: Taxonomy, diversity and geographic distribution of fungi present in Antarctica and its ap

ASPA / ASMA:	**Type:** ASPA **Number:** 140 **Name:** Parts of Deception Island, South Shetland Islands (More Details)
Permit Number:	
Number of people:	**Permitted to enter:** 7 **That actually entered:** 6
Permit Period:	**From:** 05 Nov 2014 **To:** 13 Dec 2014
Purpose:	1. To perform continuous monitoring on diversity of Chlorophytes, Rhodophytes, and Phaeophyceae, using morphoanatomical features and molecular approaches, having as priority on infralittoral samplings, alien species or taxa geographical distribution changes, mainly at sensible areas showing high vessels frequency, including tourism. 2. Detect photossinthetic parameters of conspicuous species 3. To document chemical extracts obtained from conspicuous seaweeds. 4. Isolate strategic chemical coumpounds for aclimatation of adverse conditions such as: Photossinthetic pigments, carotenoids, lipids (ômega 3 and 6), and phytoquelatins 3 and 4. 5. Study chemical composition of bioactive extracts: antioxidant potencial, leishmanicide, antitumoral, antiviral, reductor potencial. 6. To evaluate concentrations and types of micosporinas like-aminoacidos (MAA), absorbing substances of UV radiation, comparing with seaweeds from tropical zones. 7. Associated distribution and biomass of conspicuous seaweed with abiotic parameters. 8. Summer continuous monitoring of temperature, salinity, pH, dissolved oxygen, and UV radiation from sampling sites; 9. Analyze concentrations of heavy metals in the bottom sediments and also in some target macroalgae species; 10. Publishing teaching material regarding seaweeds species and marine fungi aiming to promote PROANTAR and introduce the polar research relevance in public high schools; 11. Trainee human resources through monographs, Master and Doctoral program. 12. Create a herbarium Antarctic collection 13. Establish a chemical extract collection
Summary of activities:	Thallus and or fronds of macroalgae were collected on intertidal zone of Telephone Bay, Whalers Bay, Pendulum Cove and Fumarole Bay, aiming taxonomic, molecular and biochemical analysis. Telephone Bay, Whalers Bay, Pendulum Cove and Fumarole Bay: 3 specimens of each taxa aiming diversity approaches and 20 specimens of conspicuous target species aiming biochemical and microbiological approches.
Event or project name/number:	Biodiversity, monitoring, survival strategies and bioprospection of extremofilous seaweeds along Mar

ASPA / ASMA:	**Type:** ASPA **Number:** 140 **Name:** Parts of Deception Island, South Shetland Islands (More Details)
Permit Number:	
Number of people:	**Permitted to enter:** 8 **That actually entered:** 2
Permit Period:	**From:** 01 Jan 2015 **To:** 05 Feb 2015
Purpose:	1) Test the hypothesis Holarctic origin of the target species with posterior dispersal to the south, focusing specially on the "American Pathway". 2) Understand the importance of the Neotropics on the dispersal processes of bipolar species to Western Antarctica and consequently to Antarctic colonization. 3) Compare the genetic diversity among mosses and lichens with similar distribution pattern. 4) Compare the morphological and genetic diversity in bipolar mosses and lichens. 5) Identify, using molecular markers, if there are cryptic species or speciation processes occurring. 6) Use molecular markers to check if the molecular diversity found among bipolar populations is reflected on its geographical distribution. 7) Increase our understanding of which factors plays a major role in dispersal and colonization between Antarctica and South America.
Summary of activities:	Collect samples of bryophytes and lichenes. - Lichens: 71 samples Enseada Pendulum - S 62°56'14.75" e W 060°35'31.96"; Fumarole Bay - S 62°58'17.62" e W 060°42'52.81"; Whalers Bay - S 62°58'24.1" e W 060°42'55.2" - Bryophytes: 50 samples (Enseada Pendulum - S 62°56'14.75" e W 060°35'31.96"; Fumarole Bay - S 62°58'17.62" e W 060°42'52.81"; Whalers Bay - S 62°58'24.1" e W 060°42'55.2"; Crater Lake -62,98122 e -60,67581
Event or project name/number:	Evolution and Dispersal of Antarctic Bipolar species of Mosses and Lichens

ASPA / ASMA:	**Type:** ASPA **Number:** 145 **Name:** Port Foster, Deception Island, South Shetland Islands (More Details)
Permit Number:	
Number of people:	**Permitted to enter:** 7 **That actually entered:** 6
Permit Period:	**From:** 05 Nov 2014 **To:** 13 Dec 2014
	1. To perform continuous monitoring on diversity of Chlorophytes, Rhodophytes, and Phaeophyceae, using morphoanatomical features and molecular approaches, having as priority on infralittoral samplings, alien species or taxa geographical distribution changes, mainly at sensible areas showing high vessels frequency, including tourism. 2. Detect photossinthetic parameters of conspicuous species 3. To document chemical extracts obtained from conspicuous seaweeds. 4. Isolate strategic chemical coumpounds for aclimatation of adverse conditions such as: Photossinthetic pigments, carotenoids, lipids (ômega 3 and 6), and phytoquelatins 3 and 4. 5. Study chemical composition of

Purpose:	bioactive extracts: antioxidant potencial, leishmanicide, antitumoral, antiviral, reductor potencial. 6. To evaluate concentrations and types of micosporinas like-aminoacidos (MAA), absorbing substances of UV radiation, comparing with seaweeds from tropical zones. 7. Associated distribution and biomass of conspicuous seaweed with abiotic parameters. 8. Summer continuous monitoring of temperature, salinity, pH, dissolved oxygen, and UV radiation from sampling sites; 9. Analyze concentrations of heavy metals in the bottom sediments and also in some target macroalgae species; 10. Publishing teaching material regarding seaweeds species and marine fungi aiming to promote PROANTAR and introduce the polar research relevance in public high schools; 11. Trainee human resources through monographs, Master and Doctoral program. 12. Create a herbarium Antarctic collection 13. Establish a chemical extract collection
Summary of activities:	Thallus and or fronds of macroalgae were collected on intertidal zone of Pendulum Cove: 3 specimens of each taxa aiming diversity approaches and 20 specimens of conspicuous target species aiming biochemical and microbiological approches.
Event or project name/number:	Biodiversity, monitoring, survival strategies and bioprospection of extremofilous seaweeds along Mar

ASPA / ASMA:	**Type:** ASPA **Number:** 150 **Name:** Ardley Island, Maxwell Bay, King George Island (25 de Mayo) (More Details)
Permit Number:	
Number of people:	**Permitted to enter:** 7 **That actually entered:** 5
Permit Period:	**From:** 13 Feb 2015 **To:** 21 Feb 2015
Purpose:	Conduct the phytosociological studies to locate the different vegetation occurring in the study area, assessing trends and the occurrence of environmental impacts caused by phenomena natural or by human action. - Describe the plant formations and associations, based mainly on vegetation cover and species lists. - Determine the abundance, diversity and identity of microorganisms (bacteria, archaea and fungi) that live in the studied areas. - Relate the plant and microbial communities of the region with the bird colonies, which are important data in the impact assessment environment, being indicative of the presence of birds. - To assess the genetic diversity of plant species of Maritime Antarctic to understanding of the phylogeographical relationship of Polytrichum moss species in order to understand the dynamics of populations of Sub Antarctic and bipolar species.
Summary of activities:	Explorationwalksand collection of samples as indicated in the visiting area goal all points of the island where there is vegetation, except in the Penguin rookeries. Samples were obtained according to the map below (item 19) being collected about 1 g of each of briófita examplar, lichen and algae. For samples of Deschampsia antarctica were collected 4 céspedes (tufts) for laboratory analysis.
Event or project name/number:	Plant communities from ice-free areas of Antarctica

ASPA / ASMA:	**Type:** ASPA **Number:** 150 **Name:** Ardley Island, Maxwell Bay, King George Island (25 de Mayo) (More Details)
Permit Number:	
Number of people:	**Permitted to enter:** 4 **That actually entered:** 4
Permit Period:	**From:** 13 Feb 2015 **To:** 21 Mar 2015
Purpose:	1) Test the hypothesis Holarctic origin of the target species with posterior dispersal to the south, focusing specially on the "American Pathway". 2) Understand the importance of the Neotropics on the dispersal processes of bipolar species to Western Antarctica and consequently to Antarctic colonization. 3) Compare the genetic diversity among mosses and lichens with similar distribution pattern. 4) Compare the morphological and genetic diversity in bipolar mosses and lichens. 5) Identify, using molecular markers, if there are cryptic species or speciation processes occurring. 6) Use molecular markers to check if the molecular diversity found among bipolar populations is reflected on its geographical distribution. 7) Increase our understanding of which factors plays a major role in dispersal and colonization between Antarctica and South America
Summary of activities:	Search and sampling of target species for the whole island but the penguin rookery. The samples were obtained in the point showed at the ma, looking for 05 individuals of each target species inside any "vegetation island". We could locate 15 target species of lichens (300 samples) and 06 target species of bryophytes (250 samples).
Event or project name/number:	Evolution and Dispersal of Antarctic Bipolar species of Mosses and Lichens

ASPA / ASMA:	**Type:** ASPA **Number:** 171 **Name:** Narebski Point, Barton Peninsula, King George Island (More Details)
Permit Number:	
Number of people:	**Permitted to enter:** 4 **That actually entered:** 2
Permit Period:	**From:** 07 Feb 2015 **To:** 20 Feb 2015
Purpose:	1) Test the hypothesis Holarctic origin of the target species with posterior dispersal to the south, focusing specially on the "American Pathway". 2) Understand the importance of the Neotropics on the dispersal processes of bipolar species to Western Antarctica and consequently to Antarctic colonization. 3) Compare the genetic diversity among mosses and lichens with similar distribution pattern. 4) Compare the morphological and genetic diversity in bipolar mosses and lichens. 5) Identify, using molecular markers, if there are cryptic species or speciation processes occurring. 6) Use molecular markers to check if the molecular diversity found among bipolar populations is reflected on its geographical distribution. 7) Increase our understanding of which factors plays a major role in dispersal and colonization between Antarctica and South America
Summary of activities:	Collection of botanical material (lichens and bryophytes), image capture using digital camera (Canon Rebel III) and registration of geographical coordinates, where specimens of groups were found (Garmin GPS). 90 specimens of lichens and bryophytes were collected at 6 points located on the ASPA 171. The points where the samples were collected are below: 62° 14' 03.4'' S; 058° 46' 07.1''. alt. 87 m. 62° 13' 57.0''S; 058° 46' 37.1'W, alt. 124 m. 62° 13' 53.0'S; 058° 46' 45.9''W, alt. 146 m. 62° 14' 00.1'' S; 058° 46' 54.2''. alt. 11 m. 62° 14' 05.7'' S; 058° 45' 39.0'' W, alt. 112 m. 62° 14' 11.7'' S; 058° 45' 43.4'' W, alt. 114 m.
Event or project name/number:	Evolution and Dispersal of Antarctic Bipolar species of Mosses and Lichens

Environmental Information - Area Protection and Management (Change or Damage)

No change or damage was observed during this reporting period.

Other Information - Relevant National Legislation

No new information have been provided during the reported period.