

PTO. MADRYN - VALDES PENINSULA
PATAGONIA EXPEDITION

1998-1999

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APART HOTEL ARENALES

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826-0513

Arenales 2580

(esquina Ecuador)

Jose Cafaro (Matias' brother)

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or

Ana Cafaro (grandmother)

821-7978

Virginia Ribetti, Home: 781-9721

Parents: 664-0019

Daniel's lab: 546-3349

THE FALLS OF IGUAZÚ

THE RAILWAY TO THE CLOUDS

CHACO

MESOPOTAMIA

ACONCAGUA

AND

BUENOS AIRES

PAMPA

THE SEVEN LAKES

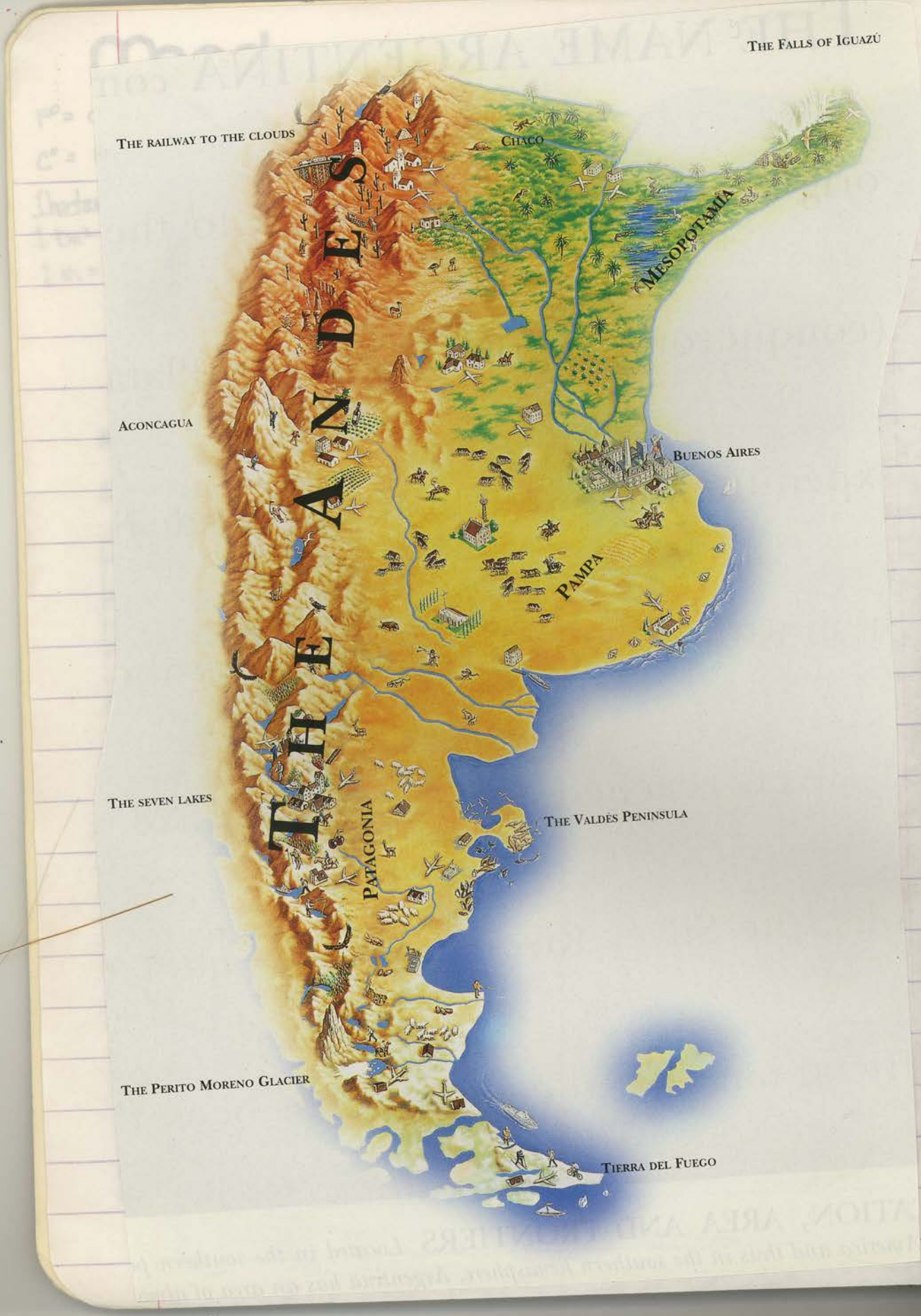
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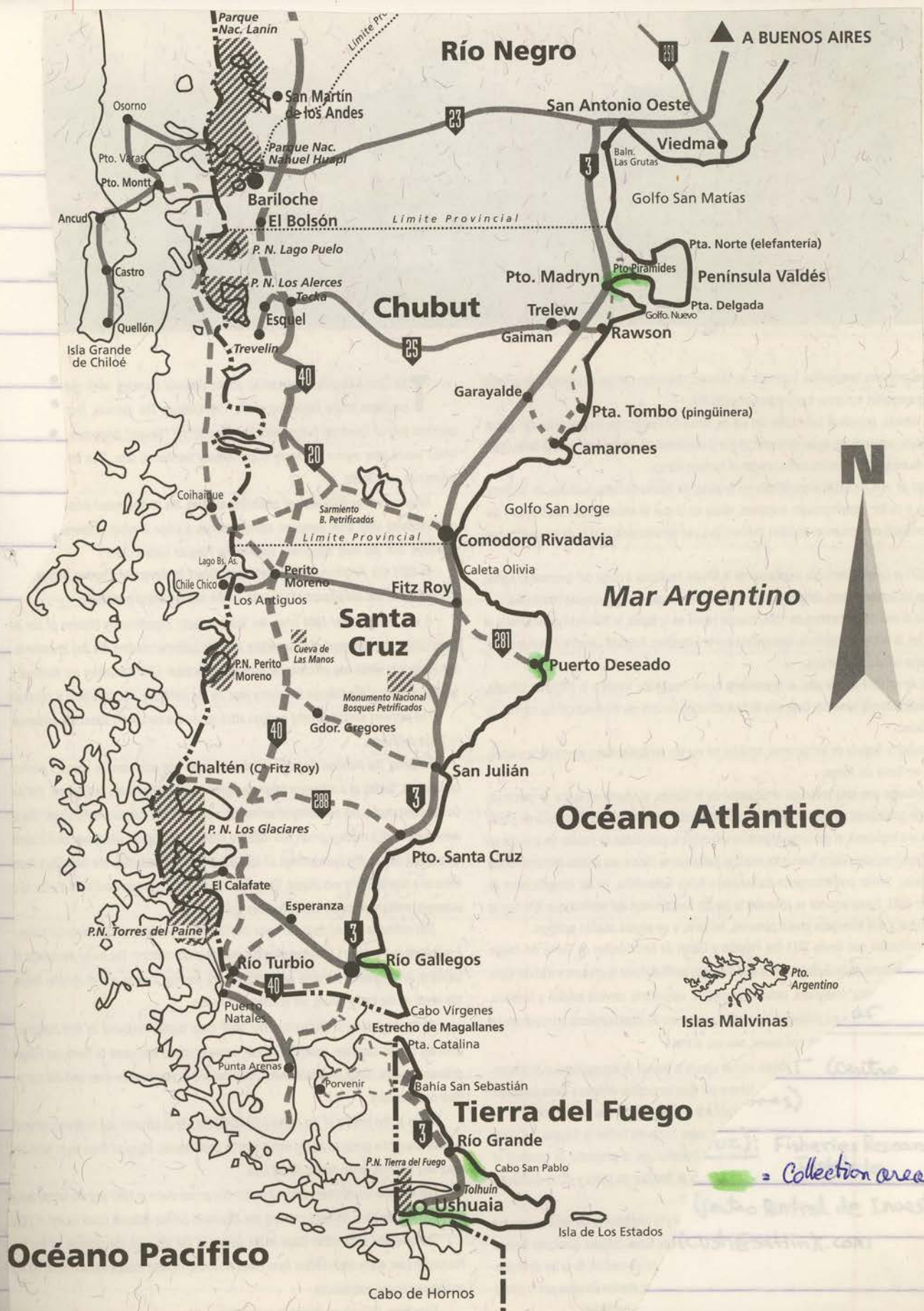
THE VALDÉS PENINSULA

PATAGONIA

THE PERITO MORENO GLACIER

TIERRA DEL FUEGO





Collection areas

PTO. MADRYN - VALDES PENINSULA

Elena Gomez Simez

Victor & Gloria Alonso

Univ. Patagonia

(Cholaiida)

→ Centro Nacional Patagónico

Adán Edgardo

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280 9 de Julio Ave., Rawson

Ushuaia

① Localiza 6 dogs Polo \$495 (750 km.)

0901-32136

Plu 9:30 AM (1/8/99) @ San Martin 1222

Maria or Ismael

② Peter Sealas (Utah state, Logan, UT). Plant physiol. (UV).

BOLIVIA NOTES

1. Altitude in central La Paz = ~~11,700'~~ 12,200'
2. Hotel El Libertador is right out of the 50's but has been kept up. A good bargain. Kitchen is excellent & inexpensive.
3. The 2 tour companies that the "Bolivia Handbook" (Foot Prints) recommends are not good (very expensive, limited English, not especially helpful): Crillon Tours (on Ave. Camacho) and Transturin (on Ave. Camacho). The 2 best places we found were the National Tourism Office (Plaza Estudiante) and "Peru-Bolivian Tours" (on Calle Loayza, in edif. Med. de Ayacucho: phone = 363720, 365845). This latter place charged 1/2 the price as the 2 recommended companies for various tours.
4. A trip to the Yungas is worth it only to see the amazing 16,600' pass through the Andes, and then the rapid drop to 6,600' at Coroica (10,000' in about 3 hrs). The road to Coroica is definitely, as the "Bolivia Handbook" says, the most dangerous road in the world (1-lane on steep mountain sides/cliffs, with much mud & river crossings, few pull-overs, fast drivers & big trucks from the Selva, etc.). Many of the blacks (African slave descendants) in this area have taken up the Aymara culture, dress, & language!

5. Tree-line in Bolivia is approx. 11,500'
6. Coroico is a miserable little 3rd world tropical shit hole pueblo. Probably the "Hotel Esmeralda" is the best hotel, altho the "Viejo Mdina" is acceptable. When dry, Coroico is a city of dust; when wet it is a city of mud. Sewerage seems to be leaking out of the ground everywhere. Reminds me of a miniature Belize City. Too bad, the setting is beautiful & with just a little infrastructure this could be a place like Monteverde (Costa Rica).
7. Copacabana is 12,400'. (Lake Titicaca)
8. Mayra Mirna Martinez G. (& Daniel)
Zona Rosario
C/Aroma #4
La Paz, Bolivia } send her an espresso machine
9. Road to Lake Titicaca is wonderful. Ferries (cars & people) run from San Pablo to San Pedro (on demand - cheap), from where you can drive to Copacabana in ~ 30 min. many good hotels in Copacabana, including one that is exclusively vegetarian. The Hotel Rosario del Lago is rated 3-star, but we rated it 5-star. An excellent bargain with an excellent kitchen. Isla del Sol is beautiful - like a Balearic Island 100 yrs ago! Many good pensiones on the island (primitive but clean & charming).
10. Tiahuanaco site is worth a visit. This 20,000 yr old culture pre-dated Inca & Aymara & was contemporaneous w/ Mesopotamia.

PATAGONIA NOTES

Pto. Madryn (Chubut Province), 12/22 - 12/27

1. Although we were told by the Provincial Protected Area's office that permits were needed in Chubut only to collect in reserves, we obtained one anyway (on Gloria Alonso's urging). Permits are issued by Nestor Raul Garcia, Director General of "Conservation & Quality Control, Organismo Provincial de Turismo, Provincia del Chubut" in Rawson. Susanna, owner of the Bungalows Nuevo Leon, is a personal friend of Garcia's (known as "kikki" to his friends). The director of CENPAT, in Pto. Madryn, called Sr. Garcia to support our request. The director (Dr. Adán Edgardo Pucci) also took the opportunity to give us a lecture that we should have contacted him first (months ago), & Gloria Alonso scolded us & informed us that any biology done in the area should be with CENPAT's blessings. She was pulling a power/turf trip on us I believe. To the best of our knowledge (Poore / Brusca), Gloria (& her friend Elena) are non-publishing "scientists." The only real

PATAGONIA NOTES

scientist we met at CROPAT was Catalina Pastor.
The Univ. of Patagonia is on the same grounds as
CROPAT (Julian Burgos' alma mater).



2.

The drive around the Veldes Peninsula is outstanding. We saw many vultures & common martinets (Eudromia elegans), a pheasant-size quail-like ground bird with a tall head feather. Also: guanaco (herds of 2-6), curze (Microcavi australis), a small cavi; armadillo; rhea-like birds called choique; and miles & miles of creosote scrub (Chorrea divaricata). Also active during the day were Patagonian foxes, Southern Elephant Seals, Sea lions (resembling Stellar's Sea lion - huge maned males), Magellanic Penguins, vultures, Royal Terns, many gulls, and a small shearwater or albatross. A full tank of gas, and 12 hrs., are needed to drive the entire peninsula. A stop at the Salina Grande will cost \$2 pp. to the man at Rancho ("Estancia") Elena. The salina is 42m below sea level - one of the lowest places on the earth.

(Pteropternia elegans)

subignina
①

Isopods Reported From Argentina (total = ~60)

① moruloidea darwini (TdelF, Kerg Is.)

Sphaeromatidae

- ② Cassidinopsis emarginata (Patagonia - Chile & AR)
- ③ Euvallentinia darwini [= Cymodocea darwini] (Chile & AR)
- ④ Exosphaeroma calcareum (AR) - shallow
- ⑤ Caecocassidias patagonica (AR) - 400-500m
- ⑥ Cassidias argentina (AR) - shallow
- ⑦ Isoclodus calcareus (AR) - shallow
- ⑧ Pseudosphaeroma platense (AR) - shallow
- ⑨ Waiteolana tuberculata (AR) - shallow
- ⑩ Isoclodus magellanica (Strait of Magellan) - 12-200m

Cymothoidae

- ① Artystone trysibia (Brazil, AR, Paraguay) freshwater
- ② Braga bachmanni (Brazil, AR) freshwater
- ③ Braga fluvialis (Brazil, AR) freshwater
- ④ Braga patagonica (Brazil, AR) freshwater
- ⑤ Isonobula maculatus (AR) freshwater
- ⑥ Paracymothoe parva (AR) freshwater
- ⑦ Riggia paranensis (AR) freshwater
- ⑧ Telotha henselii (AR, Brazil, Uruguay) freshwater

Aegidae

- ① Aega falklandica (Falk. Is.)
- ② Aega semicarinata (Trans-Antarctic)
- ③ Aega edwardsi (AR, Kerg. Is.)

18 *Edotia oculata* (Falklands)
 19 *Platidotea magellanica*
 (St. of Magellan)

Anuropidae

①

Cirolanidae

① *Excirrolana argentinae* (AR) - littoral

② *Natanolana pastorei* (Tdel F) - shallow

Valvifera

4 arcturids, 5 chaetiliids,

15 *Edotia gibbata* (Falklands)
 16 *Edotia corrugata* (Falklands)
 17 *Edotia lilljeborgi* (Patagonia)

⑩ *Cleantis granulosa* (AR) - littoral

⑪ *Syidotea marplatensis* (AR, Brazil) - littoral

⑫ *Arcturides miersi* (AR) - 400-500m

⑬ *Edotia tuberculata* (AR Patagonia)

⑭ *Clanella globicauda* (Tdel F) - shallow

And, according to G. Poore, *Edotia magellanica* Cunningham, 1871 (65m)
 And, according to Alberto Dolcemascolo: *Edotia doellojuradoi*

Asellota

① *Austrofillus furcatus* (AR)

② *Iais pubescens* (trans-Gondwanan)

③ *Lathrippa longicauda* (trans-Gondwanan)

④ *Neojaera antarctica* (Tdel F, Kerg. Is.)

⑤ *Joeropsis curvicornis* (trans-Gondwanan)

⑥ " *intermedius* (Tdel F, Kerg. Is.)

⑪ *Tenupedunculus dentimanus* (AG)

⑫ *Paramanna magellensis* (St. of Magellan)

+ 13 other spp. of Asellota from Falklands

Bopyridae 3 spp.

Serolidae 11 spp.

Anthuridea 2 spp.

Samples taken in Pto. Madryn area in: Golfo Nuevo (Playa Federico, Pta. Loma) and on Valdes Peninsula (Caleta Valdés), as well as on the public beach at Pto. Madryn. The entire region here is mudstone (clay) & sand/mud beaches. There are no real rocks. The littoral mudstone is hard & populated with vast colonies of Brachiodontes (a small black mussel, $\frac{1}{2}$ -2 cm long). The most common crab is Cyrtograpsus (vis Elena Gomez). Two isopods predominate, an idoteid & a sphaeromatiid. Elena Gomez claims the idoteid is Idotea balthica, but I doubt it. She also claims the very common littoral barnacle (competing w/ Brachiodontes) is the introduced Balanus glandula (samples taken for Bill Newman to ID).

The temperatures (& winds) here are amazing. Daily highs exceed 100°F and nightly lows fall to $\sim 60^{\circ}\text{-}65^{\circ}\text{F}$. Every afternoon a blistering wind blows strong for ~ 6 hrs. Apparently all of the Patagonia mainland is like this.

The main bay where Pto. Madryn sits is so polluted that there is little life along its shores for several miles either side of the city, not even Excirrolana!

Serolids are common & abundant in the sublittoral of Patagonia. A hand-pulled dredge in less than 1m (at low tide) of water collects them. They are also occasionally collected in the

Pto. Madryn Area Collections
(PAT 1 - PAT 16)

PAT 1: South Atlantic Ocean, Argentina, Chubut Province, Golfo Nuevo, Punto Ameghino, Playa Federico, 42°36.63'S, 64°50.18'W. 23-Dec-98. 0.0m. Low intertidal rock pools (mudstone), mixed algae. RC Brusca & W Moore.

PAT 2: South Atlantic Ocean, Argentina, Chubut Province, Golfo Nuevo, Punto Ameghino, Playa Federico, 42°36.63'S, 64°50.18'W. 23-Dec-98. 0.0m. Low intertidal mudstone, interstitial fauna of mussels, RC Brusca & W Moore.

PAT 3: South Atlantic Ocean, Argentina, Chubut Province, Golfo Nuevo, Punto Ameghino, Playa Federico, 42°36.63'S, 64°50.18'W, 23-Dec-98, 0.0m. Low intertidal rock pools, mixed algae. GCB Poore.

PAT 4: South Atlantic Ocean, Argentina, Chubut Province, Golfo Nuevo, Punto Ameghino, Playa Federico. 42°36.63'S, 64°50.18'W. 23-Dec-98. 0.0m. Coarse sandy beach, highwater level, under stranded *Codium*. GCB Poore.

PAT 5: South Atlantic Ocean, Argentina, Chubut Province, Golfo Nuevo, Punto Ameghino, Playa Federico, 42°36.63'S, 64°50.18'W. 23-Dec-98. 0.0m. Coarse sandy beach, lowwater level, under drift *Codium*. GCB Poore.

PAT 6: South Atlantic Ocean, Argentina, Chubut Province, Golfo Nuevo, Punto Ameghino, Playa Federico. 42°36.63'S, 64°50.18'W. 23-Dec-98. 0.0m. Mid-tide level rock pools, among algae. GCB Poore.

PAT 7: South Atlantic Ocean, Argentina, Chubut Province, Golfo Nuevo, Puerto Madryn, beach, 42°46.75'S, 65, 01.32'W. 22-Dec-98. 0.0m. Sandy beach, low-water level, under drift *Codium*. W Moore. (Idoteids)

PAT 8: South Atlantic Ocean, Argentina, Chubut Province, Golfo Nuevo, Punto Ameghino, Playa Federico, 42°36.63'S, 64°50.18'W. 24-Dec-98. 0.5m. Baited trap at edge of rock (mudstone) platform. RC Brusca & W Moore.

PAT 9: South Atlantic Ocean, Argentina, Chubut Province, Golfo Nuevo, near Puerto Valdez, SW side of inlet, 42°24.18'S, 63, 36.96'W. 24-Dec-98. 0.0m. Tide pool near water edge, muddy gravel. RC Brusca & V Ribetti.

PAT 10: South Atlantic Ocean, Argentina, Chubut Province, Golfo Nuevo, Puerto Madryn, beach, 42°46.75'S, 65, 50.18'W. 25-Dec-98. 0.0m. Low intertidal rock pools (mudstone), mixed algae. RC Brusca & GCB Poore.

PAT 11: South Atlantic Ocean, Argentina, Chubut Province, Golfo Nuevo, Puerto Madryn, beach, 42°46.75'S, 65, 50.18'W. 25-Dec-98. 0.0m. Low intertidal rock pools (mudstone), polychaete tubes. RC Brusca.

Pto. Deseado (Santa Cruz Province) 12/27 - 12/31

intertidal zone. Specimens captured in copula have the ♂ (larger) with his sternum against the ♀ dorsum, clinging to her with his long 2nd pereopods which hook over the edge of the ♀s carapace.

Samples from Pto Madryn: PAT 1 to PAT 16.

PAT 12: South Atlantic Ocean, Argentina, Chubut Province, Golfo Nuevo, Puerto Madryn, beach, 42°46.75'S, 65, 50.18'W. 25-Dec-98. 0.0m. High water pools, under mudstones. RC Brusca & GCB Poore.

PAT 13: South Atlantic Ocean, Argentina, Chubut Province, Golfo Nuevo, Punta Loma, NE end of Playa del Pozo, 42°49.44'S, 64°53.14'W. 26-Dec-98. 1.0m. Mini-sled on sandy beach, fine sand. GCB Poore. (Serolids, idoteids, many amphipods)

PAT 14: South Atlantic Ocean, Argentina, Chubut Province, Golfo Nuevo, Punta Loma, NE end of Playa del Pozo, 42°49.44'S, 64°53.14'W. 26-Dec-98. 0.0m. Low intertidal rock pools, mixed algal wash. RC Brusca.

PAT 15: South Atlantic Ocean, Argentina, Chubut Province, Golfo Nuevo, Punta Loma, NE end of Playa del Pozo. 42°49.44'S, 64°53.14'W. 26-Dec-98. 0.0m. High-water, under mudstones and in *Codium*. RC Brusca & W Moore. (Idoteids)

PAT-16. Argentina, Chubut Province, Golfo Nuevo, "Puerto Madryn, beach". 42°46.75S, 65°50.18'W. 26-Dec-98. 0.5m. Mini-sled on sandy beach, fine sand. VL Ribetti & GCB Poore.

Pto. Deseado (Santa Cruz Province), 12/27 - 12/31

Here, a former river bed has created a huge cut in from the coast, an "estero," that runs with fresh water only during the spring rains. The rest of the year it flushes twice daily with tidal flow. The tides are large in the mouth of the estero ("Rio Deseado") and increase to many meters further up the narrowing channel. Around the city itself they appear to be 2-4m. Surface water $T_0 = 15^{\circ}\text{C}$. (= 59°F) to 12°C (= 54°F).

We stayed at the "Residencial Los Olmos" for \$40/night (doubles) & used their garage as a lab. A boat tour of the area revealed the white bodied dolphin ("Tonina overo," or Commerson's dolphin), nesting grey cormorants & common cormorants, swans (white body, black neck & head), and Magellanic penguins. There is a photo of a giant squid on the wall of the hotel, with measurements: 200 kgs, 3.8 m long. Also common are black oyster-catchers ("Astrero Negro"). The rockhopper penguin ("Pinguino penacho amarillo"), Eudyptes crestatus also occurs here, as well as two-banded plovers. Also the Patagonian armadillo (Pichi Patagonica, Zaedyus piching).

We visited Isla Pajaros, where 30,000 magellanic penguins nest ("jackass penguins"), as well as many black oystercatchers & gulls (photos of oystercatcher eggs taken). The entire area of the "Ria" is a reserve. There is only one "ecotour" person here, a nice young man named Ricardo who has a 12-person launch to take people around in, "Gypsy Tours".

Trawls, dredges, and hand collections made around Islas Quinto, Larga, and Quiroga and in a small fjord called Cañadón Torcido. Outside the Ria, shore collections made at Balneario Las Piletas, N. of town. The sphaeromatids are more abundant here than I have ever seen them. Gary's little sled recovers many mysids, some serolides, & if algae present, valviferans & sphaeromatids.

Pto. Deseado has a long history of exploration. Magellan himself visited the area ~ 1520, as did Thomas Cavendish, and Charles Darwin (in 1834). During Colonial times, the Spanish maintained a whaling station here, for the So. Right whale (*Eubalaena australis*), known locally as "Ballena Franca."

Hand collections & algal washes made at Cabo Blanco, 70 km N. (by road) of Pto. Deseado. Virginia collected an Aegid in mussel beds. Photos taken here of Faro Cabo Blanco & the old cemetery (graveyard). Many sphaeromatids (2 spp), an aegid, & probably some small critters (aschelminth & anthurids). 3 bags from algal washes.

Last collection made along shore, across from Isla Quinta: Supralittoral oniscids & one cirriid from trap (but probably left over from previous trap sample - same bait reused!). This sample not numbered (in vial).

Alberto Dolcemascolo

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According to Alberto (New Year's eve rendezvous) the 2 mixed mussels in the mussel beds here are (1) Mytilus chilensis (lg.) and (2) Brachiodontes (sm.). Edotia daellojuradsi occurs associated with the Mytilus,

Pto. Deseado Area Collections
(PAT 17 - PAT 33)

- PAT-17. Argentina, Santa Cruz Province, Puerto Deseado, S coast, rocky beach near railway station. 47°45.00'S, 65°56.00'W. 28-Dec-98. 0.0m. Hand collecting on intertidal rocky shore, under rocks in pools. GCB Poore & W Moore.
- PAT-18. Argentina, Santa Cruz Province, Puerto Deseado, S coast, rocky beach near railway station. 47° 45.39'S, 65°53.42'W. 28-Dec-98. 0.2m. Hand-held net swept along bottom on mud bottom of large tide pool on rocky shore. M Cafaro.
- PAT-19. Argentina, Santa Cruz Province, Ria Deseado, near Puerto Deseado. 47°45.10'S, 65°56.20'W. 28-Dec-98. 5.0m. Mini-sled pulled by hand on bottom; mud and drift *Macrocystis*. GCB Poore.
- PAT-20. Argentina, Santa Cruz Province, Ria Deseado, near Puerto Deseado. 47° 43.60', 65°56.53'. 28-Dec-98. 3.0m. Baited trap set near rocky shore. RC Brusca.
- PAT-21. Argentina, Santa Cruz Province, Puerto Deseado, "Gypsy Tours" (tour boat) dock. 47° 43.60', 65°56.53'. 28-Dec-98. 0.0m. Hand collected from fouling algae on pontoon. RC Brusca & W Moore.
- PAT-22. Argentina, Santa Cruz Province, Ria Deseado, near Puerto Deseado. 47°43.60'S, 65°56.53'W. 28-Dec-98. 1.0m. Mini-sled pulled by hand on mud bottom, with mixed algae (*Ulva*, etc.). GCB Poore.
- PAT-23. Argentina, Santa Cruz Province, Puerto Deseado, rocky shore near Balneario las Piletas. 47°40.00', 65°56.40'. 29-Dec-98. 0.0m. Intertidal algal washes on igneous rock platform. RC Brusca & W Moore.
- PAT-24. Argentina, Santa Cruz Province, Puerto Deseado, rocky shore near Balneario Las Piletas. 47°40.00', 65°56.40. 29-Dec-98. 0.0m. Mixed algal washes on igneous rock platform, low-water pool. GCB Poore.
- PAT-25. Argentina, Santa Cruz Province, Puerto Deseado, rocky shore near Balneario Las Piletas. 47°40.00', 65°56.40'. 29-Dec-98. 0.5m. Intertidal mussel clumps on igneous rock platform. GCB Poore.
- PAT-26. Argentina, Santa Cruz Province, Ria Deseado, near Puerto Deseado. 47°43.60', 65°56.53'. 30-Dec-98. 0.0m. Hand collection on rocky beach, high water level; under rocks. GCB Poore.
- PAT-27. Argentina, Santa Cruz Province, E side of Cabo Blanco. 47°12.18', 65°44.38'. 30-Dec-98. 0.0m. Hand collection from coralline algae, intertidal rock pools, low water level. GCB Poore.

Pto. Deseado Collections: PAT-17 to PAT-33.



PAT-28. Argentina, Santa Cruz Province, E side of Cabo Blanco. 47°12.18', 65°44.38'. 30-Dec-98. 0.0m. Hand collection from mixed algae in intertidal rock pools, low water level. GCB Poore.

PAT-29. Argentina, Santa Cruz Province, E side of Cabo Blanco. 47°12.18', 65°44.3'. 30-Dec-98. 0.0m. Hand collection from intertidal rock pools, among algae & stones, low water level. RC Brusca & W Moore.

PAT-30. Argentina, Santa Cruz Province, Puerto Deseado, S coast, rocky beach near railway station. 47°45.39', 65°53.4' 28-Dec-98. 1.0m. Small *Macrocystis* holdfast from shallow subtidal of rocky shore. GCB Poore.

PAT-31. Argentina, Santa Cruz Province, Puerto Deseado, S coast, rocky beach near railway station. 47°45.39', 65°53.42'. 28-Dec-98. 0.0. Hand collection from mussel clumps on rocky shore. RC Brusca.

PAT-32. Argentina, Santa Cruz Province, Puerto Deseado, S coast, rocky beach near railway station. 47°45.39', 65°53.42'. 28-Dec-98. 0.0m. Hand-held net swept along bottom of sandy-mud areas between intertidal rocks. GCB Poore.

PAT-33. Argentina, Santa Cruz Province, Rio Coyle, near RN3 bridge. 51°08.78'S, 69°31.81'W. 2-Jan-99. Hand collecting along head of river edge mouth, under stones; probably brackish water. RC Brusca. (amphipods only)

Rio Gallegos Area Collections
(PAT 34 - PAT 35)

PAT-34: Argentina, Santa Cruz Province, N. side of Punta Loyola (near Rio Gallegos). 51°36.57'S, 69°00.75'W. 2-Jan-99. 0.0m. Hand collecting on boulder beach, between mussels and stones. GCB Poore, RC Brusca, W Moore. (mainly *Edotia*)

PAT-35: Argentina, Santa Cruz Province, Punta Loyola, coal wharf (near Rio Gallegos). 51°36.57'S, 69°00.75'W. 3-Jan-99. 1.0m. Baited trap on muddy bottom near pier pile. RC Brusca. (amphipods only)

Rio Gallegos area (1/1/99 - 1/4/99)

Rio Gallegos is the largest city in the Santa Cruz Province, and the seat of the provincial offices. It is a pleasant & modern city, despite the Lonely Planet Guide's condemnation. The Gallegos River drains the Patagonian steppes to the west & has its headwaters mostly in Chilean Andean foothills.

The river opens into a wide deep estuary & the city sits in the heart of this embayment, on the S. shore, & has served as an oil & coal port for many decades. So much coal is shipped out of here that the shores of the entire estuary are black with coal dust & "coal mud." Hence, littoral collecting is not good. We found an Edotia living under the larger round stones, on mud, on an otherwise sterile shingle beach near Pta. Loyola. A trap set from the coal wharf at Pta. Loyola collected only large amphipods.

Although the wind in Patagonia is incessant, in Rio Gallegos it is the worst we've seen anywhere yet. At Pta. Loyola it was blowing 70-80 mph both days we were there (to collect Edotia & set the trap).

Rio Gallegos Collections: PAT-34 to PAT-35.

Edotia

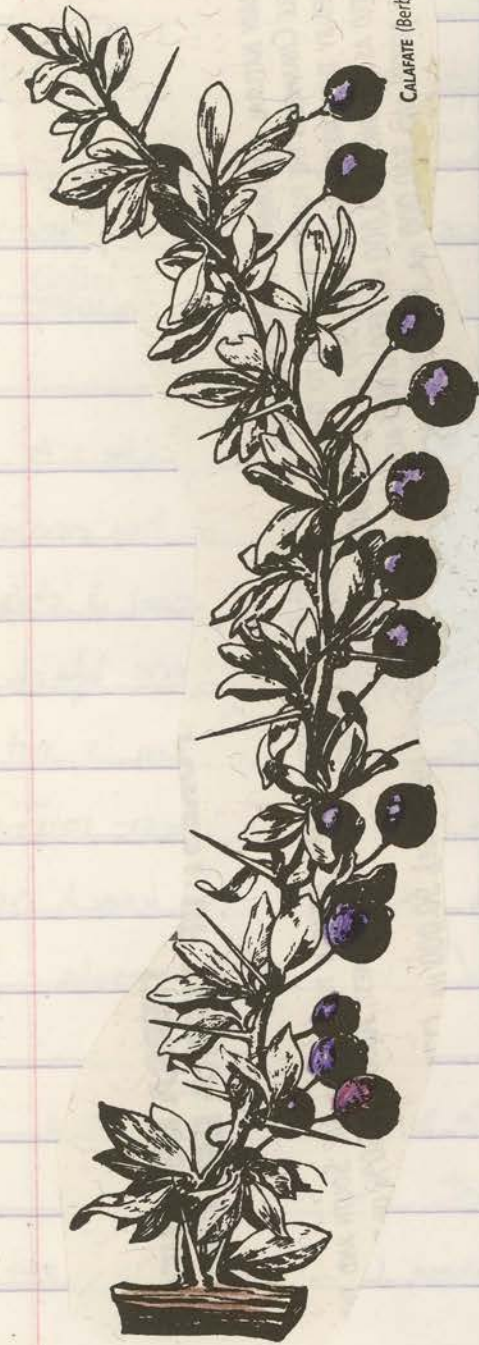
Trap



Calafate

1-16

The map shows the railway route in the Argentine...
 BEAGLE CHANNEL IS THE POINT...
 REPRESENTS AS TO...
 (2,250,000 ACRES) OR...
 20 cm/yr
 from around
 TIERRA DEL FUEGO



CALAFATE (*Berberis buxifolia*)

El Calafate / Parque Nacional los Glaciares Area (1/5-1/7)

Although El Calafate is a bit of a tourist trap, it's a fun little town (though expensive) & affords easy access to the Park (a 2 hr. drive to the Moreno Glacier overlook). The area of the Península Magallanes is the best area. The boat ride & Moreno Glacier trek is excellent & worth the cost (~\$65); it includes a short trek through the Nothofagus forest (2 spp. here; 3 in Argentina). The Moreno Glacier is moving ~1.5m/yr. in the center, ~20cm/yr. along the edges. When it blocks the passage between Brazo Rico & Canal de los Témpanos, it takes 3-4 yrs. for water pressure in the former to build up enough to break it open. The "breaking-open event" is apparently the only such event in the world & is attended by scientists, film-makers, the public, from around the world. The entire collapse takes only a few minutes & is quite spectacular. The ACA hotel at Calafate is a good bargain (\$89) but does not accept non-Argentine Automobile Club memberships for discounts.



GUINDO (*Nothofagus betuloides*)



LENGUA (*Nothofagus pumila*)

From Glacier Nat.
Park



ÑIRE (*Nothofagus antarctica*)



From Tierra del Fuego
National Park

Tierra de Fuego (4/8 - 4/14)

Ushuaia is beautiful little city in a beautiful setting, ringed by glacier covered peaks & fronted by the Beagle Channel. The federal gov't lab here, CAOC, run by CONICET, is very very nice. It would be a great place to work for a summer ("Beetles of Tierra del Fuego"). When we landed (midnight) it was 5°C, but most days have been warm & sunny, in the low 20°C's at midday. The sun sets around 10:30 PM, but twilight lasts until ~ midnight; sunrise is ~ 2:30 AM. The drive/hike up the Martial mtns is very nice; a trail runs to the small Martial Glacier. We collected beetles & oriscids along the Río Esperanza, paralleling the trail. The big salmon-colored fungus balls (*Cyttaria*), known as "Indian Bread" because they were eaten by the indigenous peoples, are abundant on the Nothofagus here.

THE 3 SO. BEECHES OF TIERRA DEL FUEGO

Nothofagus betuloides. Evergreen Beech (Coihue).



Nothofagus pumilio - High deciduous Beech (Lenga).



Nothofagus antarctica. Low deciduous Beech (Nire).



→ Peter Seales (UT State Univ., Logan)

From Glacier Nat. Park

Lenga (*Nothofagus pumilio*)

Tierra del Fuego Park

Tierra de Fuego (1/8 - 1/14)

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Peter Sealas (OT State Univ., Logan)

From Glacier Nat. Park

Lenga (*Nothofagus pumilio*)

Tierra del Fuego Park

Tierra del Fuego Collections
(PAT 36 - PAT 45)

PAT-36: Argentina, Tierra del Fuego, Ushuaia, Playa Larga, just E. of mouth of Rio Olivia. 54°48.00'S, 68°10.00'W. 8-Jan-99, 0.0m. Hand collected intertidal rocky beach with mussel beds, near low-water line. RC Brusca, GCB Poore, W Moore, VL Ribetti. (Poore & Brusca both have samples)

PAT-37: Argentina, Tierra del Fuego, Bahía Admirante Brown, W shore, 54°51.43'S, 67°30.41'W. 9-Jan-99. 0.0m. Hand collecting intertidal rocky beach with mussel beds. GCB Poore, RC Brusca, W Moore, VL Ribetti. (Poore retained this sample)

PAT-38: Argentina, Tierra del Fuego, Estancia Haberton, W shore near homestead. 54°52.41'S, 67°19.85'W. 9-Jan-99. 0.0m. Hand collecting intertidal rocky beach with mussel beds. GCB Poore, RC Brusca, W Moore, VL Ribetti. (Poore & Brusca both have samples)

PAT-39: Argentina, Tierra del Fuego, E coast, 2 km S of Estancia Viamonte, S of Rio Grande. 54°00.00'S, 67°24.00'W. 10-Jan-99. Hand collecting on intertidal sand flat; fine sand, drift algae, rocks. GCB Poore & RC Brusca.

PAT-40: Argentina, Tierra del Fuego, E coast, 2 km S of Estancia Viamonte, S of Rio Grande. 54°00.00'S, 67°24.00'W. 11-Jan-99. Hand collecting on intertidal mudstone rock flat; filamentous brown algae. GCB Poore & VL Ribetti.

PAT-41: Argentina, Tierra del Fuego, E coast, 2 km S of Estancia Viamonte, S of Rio Grande. 54°00.00'S, 67°24.00'W. 11-Jan-99. Mini-sled pulled on intertidal sand flat; fine sand & drift algae. GCB Poore & VL Ribetti.

PAT-42: Argentina, Tierra del Fuego, E coast, 2 km S of Estancia Viamonte, S of Rio Grande. 54°00.00'S, 67°24.00'W. 11-Jan-99. Hand collecting on mudstone rock flat, under stone ledges. GCB Poore & VL Ribetti.

PAT-43: Argentina, Tierra del Fuego, E coast, 2 km S of Estancia Viamonte, S of Rio Grande. 54°00.00'S, 67°24.00'W. 11-Jan-99. Hand collecting on intertidal mudstone rock flat, amongst algae. GCB Poore & VL Ribetti.

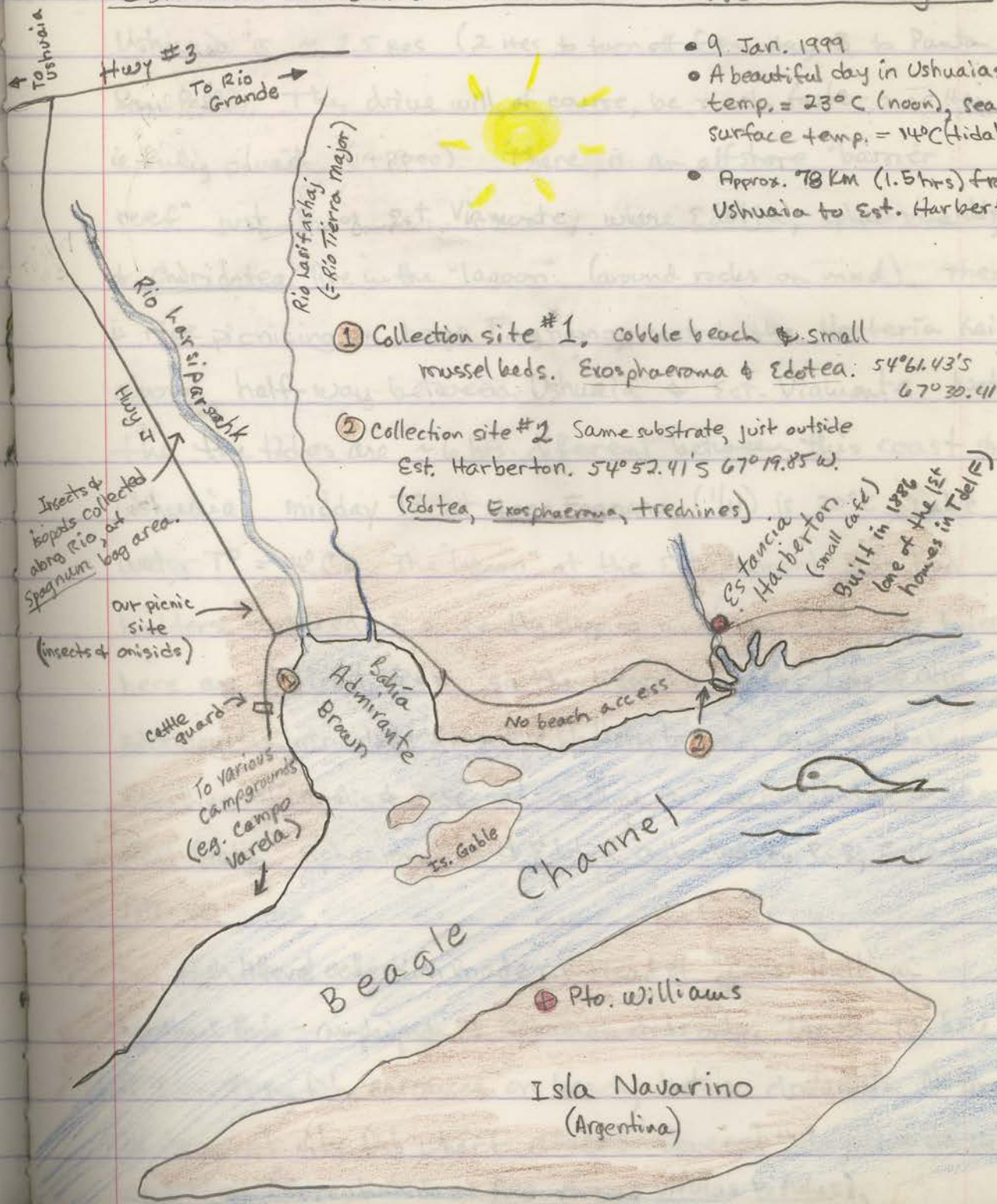
PAT-44: Argentina, Tierra del Fuego, E coast, 2 km S of Estancia Viamonte, S of Rio Grande. 54°00.00'S, 67°24.00'W. 11-Jan-99. Hand collecting on intertidal mudstone rock flat, in mud between rocks. GCB Poore & VL Ribetti.

PAT-45: Argentina, Tierra del Fuego, Ushuaia, shore W of town, @54°50.00'S, 67°26.00'W. 11-Jan-99. Rock/algae washes along rocky shore. RC Brusca & W Moore. (Sphaeromatids, amphipods, one tanaid)

Estancia Harberton Area - Tierra del Fuego



- 9 Jan. 1999
- A beautiful day in Ushuaia: air temp. = 23°C (noon), sea surface temp. = 14°C (tidal).
- Approx. 78 KM (1.5 hrs) from Ushuaia to Est. Harberton.



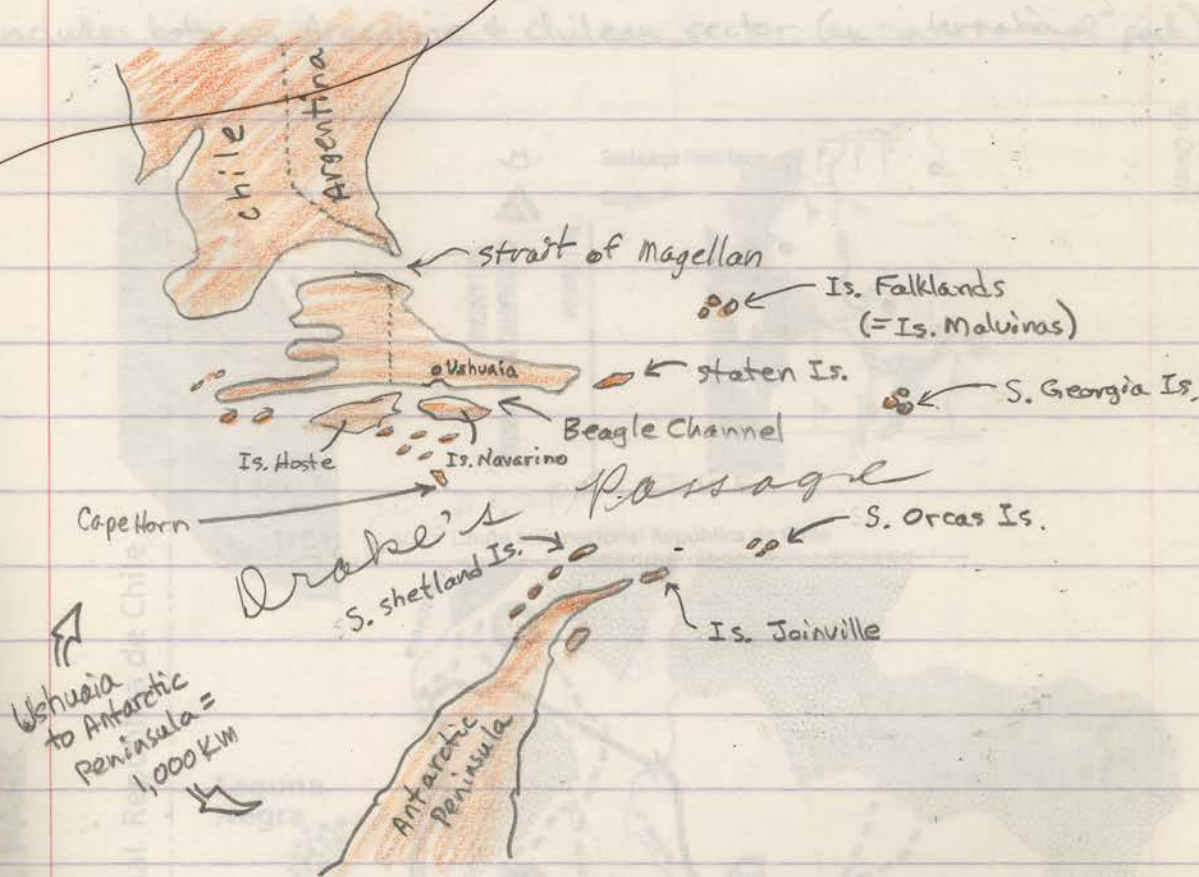
① Collection site #1, cobble beach & small mussel beds. *Exosphaeroma* & *Edotea*: 54°61.43'S 67°30.41'W.

② Collection site #2 Same substrate, just outside Est. Harberton. 54°52.41'S 67°19.85'W. (*Edotea*, *Exosphaeroma*, trechnines)

The drive to Estancia Viamonte (on the E. coast) from Ushuaia is ~ 2.5 hrs (2 hrs to turn off from Hwy 3 to Punta San Pablo). The drive will, of course, be much faster once Hwy 3 is fully paved (~ 2000). There is an offshore "barrier reef" just S. of Est. Viamonte, where Edotia, sphaeromatids, & Chiridotea live in the "lagoon" (around rocks on mud). There is nice picnicking on Lago Fagnano, next to the Hosteria Kaiken, about half-way between Ushuaia & Est. Viamonte. Note the tides are ~ 6 hrs. different between this coast & Ushuaia. midday T° at Lago Fagnano (1/11) is 20°C , lake water $T^\circ = 14^\circ\text{C}$. The "lagoon" at the Est. Viamonte site has boulders scattered on a gently sloping mud/sand flat. The tides here are at least 5+ m, so the littoral is broad. Lots of Ulva, Adenocystis intricularis (fingerlike bladders; brown), and probably Corallina officinalis & a second coralline are accumulated on the tidal flats. Sphaeromatids & Edotia collected by RCB; collection PAT-40.

High littoral collection made at head of "Coast Trail" in National Park - amphipods & sphaeromatids only. The H_2O T° here is 11°C . Many fish carcasses on beach, but no cirrolanids. No drosophilids in trap at city fish wharf either! Several "Caballos del arbol" collected (Curculionidae: Aegorhinus vitulus vitulus).

Some Tierra del Fuego Notes



- ① oldest dated rocks = 150 MYA
- ② Predominant Kelps; Macrocystis pyrifera + Darvillaea antarctica.
- ③ "Spanish moss" in Beeches is a lichen, Usnea. Mistletoe is Myzodendron punctulatum.
- ④ Indian Bread ("Darwin's fungus") in Beeches is a fungus, Cyttaria darwinii.
- ⑤ The thick spongy mats in the bogs is a moss, Sphagnum magellanicum.
- ⑥ The beautiful waxy green hummocks along the coast are all angiosperm (Umbelliferae) = Bolax gummiifera ("balsam bog").

Parque Nacional de Tierra del Fuego

includes both an Argentine & Chilean sector (an "international" park).



- 1 Serida Pampa Alta / Pampa Alta Footpath
- 2 Serida Costera / Coast Footpath
- 3 Serida Hito XXIV / XXIV Boundary Footpath
- 4 Serida Cerro Guanaco / Cerro Guanaco Footpath
- 5 Paso de la Isla / Island Walk
- 6 Laguna Negra / Laguna Negra Footpath
- 7 Paseo del Mirador / Lookout Walk
- 8 Paseo del Turbal / Peat-Bog Walk
- 9 Costanera / Beavers' Walk

- Guardaparque / Forest Ranger
- Camping - Fogones / Campsite - Kitchen Range
- Turba / Peat-Bog
- Seridas Peatonales / Footpaths

- ⑦ Rae Natalie Prosser Goodall reports 5 isopods from Tdel F:
Exosphaerona gigas, *Cassadinopsis emarginata*, *Dynameniella eatoni*, *Serolis* sp., *Edotia* sp.
- ⑧ Only one reptile occurs on Tdel F, a small lizard: *Leolaemus magellanicus*.
- ⑨ The most frequently seen birds (by RCB) in Patagonia have been (*seen on Tdel F):
- Rockhopper penguin
 - lesser rhea (introduced to Tdel F from mainland)
 - Chilean flamingo (in most salty lakes & ponds of Patagonia)
 - * Black-necked stuan
 - * Upland goose
 - Andean Condor
 - Chimango caracara
 - magellanic oystercatcher
 - * Ringed Kingfisher
 - * English sparrow (introduced from Britain)
 - * Pygmy Owl (?)

Tiempo del Conejo

The continent
from the
world (Europe)
T



CONEJO EUROPEO / EUROPEAN RABBIT



ZORRO COLORADO / RED FOX



GUANACO



CASTOR / BEAVER



CHILE



- ⑩ Fuegians used boleadoras to hunt Rheas & guanaco.
- ⑪ The 2 largest birds on Earth live on TdelF: Andean Condor & wandering Albatross.
- ⑫ Only native large mammals on TdelF are guanaco & Fuegian fox (= "Andean wolf" - Dusicyon culpaeus lycoides).
- Introduced are: Patagonian fox, rabbits, domestic dogs & stock. However, there was a native dog that is now extinct. Also introduced are beaver & muskrat.
- ⑬ Among the small native mammals are 2 unique rodents:
- (a) Turco-turco (= cururu) (Stenomys magellanicus fueginus), a small burrowing rodent.
- (b) Nutria (Myocaster coypus melanops), a rare rodent that was introduced to Europe, where it is now a pest.
- ⑭ The handsome Commerson's dolphin (Cephalorhynchus commersonii) that we saw at Pto. Deseado also lives in TdelF.
- ⑮ Ushuaia: $54^{\circ} 48.55' S$ $68^{\circ} 18.33' W$
- ⑯ Magellan discovered the strait that bears his name in 1520.
- ⑰ The first scientific collections made in TdelF were by Joseph Banks & Daniel Solander, on Cpt. James Cook's voyage of discovery (the British "Endeavour").

- (18) In 1787 Cpt. William Bligh sailed the "Boonty" round Cape Horn (it took 29 days).
- (19) 1829-1830: Cpt. Robert Fitzroy sails the "Beagle" to Tdel F & surveys it, discovering the Beagle Channel. They pick up Jemmy Button & take him to England.
- (20) 1831-1836: Fitzroy again visits Tdel F, this time with Darwin aboard. They return Jemmy Button.
- (21) Population of Ushuaia, 1976: 7,000. 1998: 42,000.
- (22) Highest mountain on Tdel F is Mt. Vinciguerra @ 4,770 ft.
- (23) Common plants seen:

Nothofagus - So. Beech (Fagaceae)

Embothrium coccineum - Firebush (Proteacea)

Micondendrum punctulatum - yellow mistletoe

Empetrum rubrum - diddle dee

Calceolaria biflora - wood's lady slipper

Phaiophleps biflora - streaked maiden

Gunnera magellanica - Devil's strawberry

Acaena magellanica - stick-tight (Rosaceae)

Bolax gunnifer - Balsam bog (Umbelliferae)

Taraxacum officinale - Dandelion

Achillea millefolium - yarrow millfoil

Codonorchis lessonii - Dog orchid (Orchidaceae)

Iguazu NATIONAL PARK

The altitude here is ~800'; low elevation subtropical forest. This is clearly the dry season. A clear day.

Sendero Macuco (recommended by Virginia Ribetti's amphibian friend) is just o.k. We did see an agouti ("Paca") - Agouti paca. Heard many unusual bird(?) sounds, but saw none. From the hotel window we saw a pair of "grand toucans" (Ramphastos toco) in a distant tree, and a large (~24") non-iguanaid looking lizard. On the upper Iguazu Falls trail we saw what locals call a "coati," but it's what PCB calls a "ring tail" (like a small coatimundi, but with a short banded tail). On the dirt road through the forest to the river we saw an "Aguti bayo" (the smaller cousin of the true agouti) - Dasyprocta azarae. There are vultures everywhere (Jote Cabeza Negra) - Coragyps atratus, and many palms have communal nesting groups of oropendula.

Mid-day air $T^{\circ} = 95^{\circ}F$. Humidity @ 80%



The altitude here is $\approx 800'$; low elevation subtropical wet forest. This is clearly the dry season. A cheap way to visit would be to get the least expensive r/t flight available to the "international airport," take a bus to Pto. Iguazu, & get a 3-star hotel there. It's a 30 min. bus ride from the city to the National Park, where all the trail heads begin & there are decent cafes, etc. The only reason to stay at the Hotel Internacional Iguazu is the convenience of being right next to the Park & Falls (a considerable convenience) and to have the amenities of a 5-star hotel.

Estimated cost of trip if booked on our own (2 pax)

2 r/t flights B.A./Iguazu: 516

2 nights at International Hotel: 240

2 airport taxi fares: 40

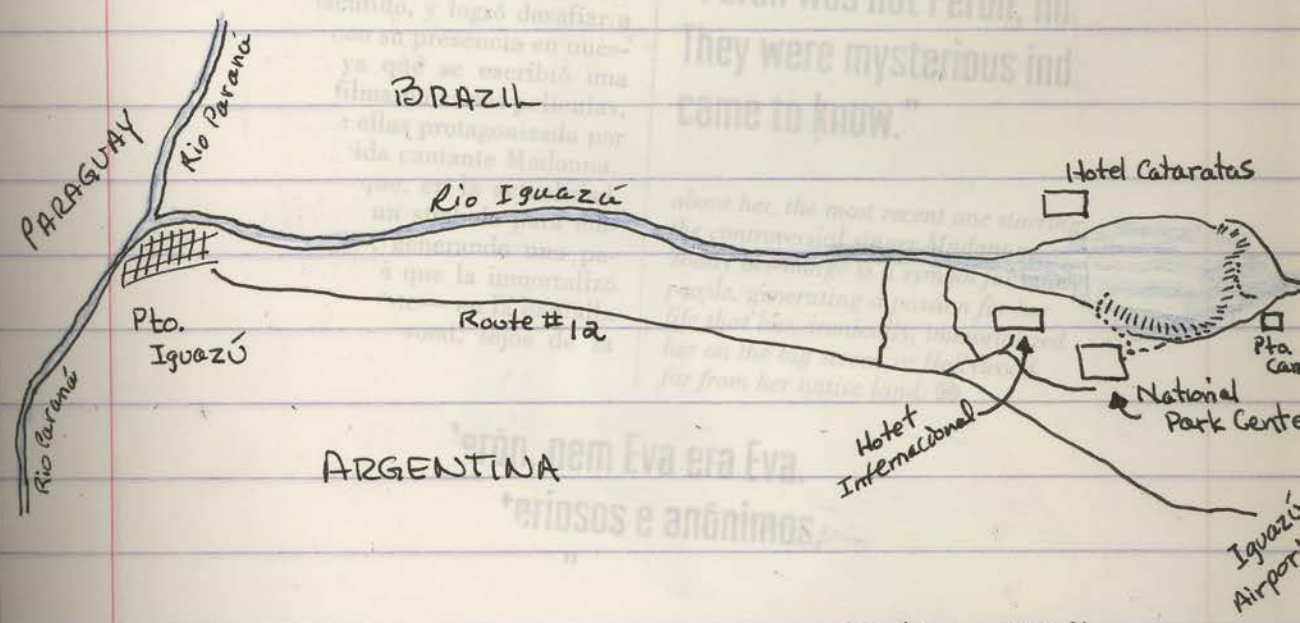
2 Devil's Throat trips: 12

2 park entrys: 20

TOTAL = \$828 (we paid \$876)

If staying in Pto. Iguazu at \$60/night hotel = \$708

$\frac{1}{2}$ if booking earlier at \$400 flights = \$642



Elevation: ~800 ft.
 To Buenos Aires 1,700 km
 To Sao Paulo 1,050 km

Buenos Aires

A grand cosmopolitan city, more akin to Paris or Madrid than to the rest of Latin America. XInt public transportation, good metro system, etc. Restaurants are about twice the price of U.S.; hotels are about 50% more than U.S. (throughout the country). Things not to miss in Buenos Aires include Cementerio Recoleta (& Eva's family Crypt), the 2 walking street/malls (Florida & Lavalle), Plaza San Martin, authentic tango shows (try San Telmo or La Boca areas).

In case you need some information or have any doubts please, don't hesitate to call me. I will be glad to help you.

Our schedule is:
Monday to Friday 10.00 a 19.00 hs.
Saturdays 10.00 a 13.00 hs.

Carla Giudice

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Tango à Buenos Aires



To see tango 1,000 km
to Buenos Aires 1,000 km
Argentina = 800 ft.

