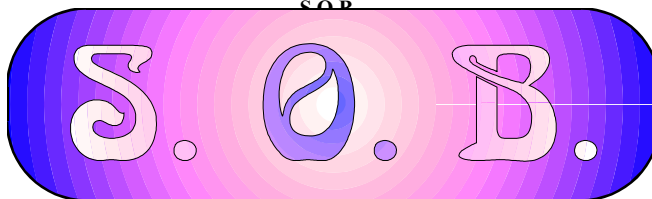


Number 35



July, 1996

Notes from Hades

The Runestone Poll results came out earlier this month, and I must admit that I was quite surprised (and pleased) when I learned of the results. Many thanks to all of you who put me into the number one position in both the zine and GM polls. I'm not sure if I deserve it, but I'll take it. It is gratifying, though to receive such accolades for doing something that I enjoy so much. Again, thanks. The full results are printed later on in the zine.

I forgot to mention last time that the Stellar Conquest game "Canis Major" finished. Bob Rutherford won a resounding victory. Congratulations to him.

"Prairie Dog" also finished this issue with a victory by Paul Bolduc's Laundry Boy. Congratulations to Paul.

The 1996 Diplomacy Hobby Awards Ballots are out. If you want one, let me know and I will be happy to send you one.

This issue's deadline will be on **Thursday, August 29 at 5:00 pm Pacific Time.** Please note that games that are run by guest GMs or in a subzine could be on a different schedule, so look at the games themselves.

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"Proteus"	Midway Campaign	0500 Nov 11
"Dingo"	4000AD (Kevin Wilson GM)	Turns 7,8

Game Openings

Machiavelli guest GMed by Mike Scott. This will be the Struggle for Dominance, Part II scenario, run using the first edition rules (I believe). No

optional rules in play. Have Jason Wilke, Ward Narhi, Bob Robles, Pasquale Giovene, Ken Marcinonis, and Lee McConnell. This will probably be starting up with the next issue.

"Rock Hound" 2038 is an 18xx-style game based on asteroid mining. Have Chris Hurley, Sean Cousins, Bill Scharf, Andy Lewis, Caleb Cousins, Sean Cousins, need 1 more.

"Chihuahua" New World is a game of colonial exploration and exploitation. Have Kevin Wilson, Bill Scharf, Andy Lewis, Dan Eisenhut, and Brendan Whyte, need 2 more.

"Fleabag" Machiavelli, 1995 edition. Please let me know whether you want basic, advanced, or optional rules (and if optional rules, which optional rules) when you sign up. Current preferences are for the basic game. Have Berry Renken, Ray Grib, Jason Wilke, Andy Lewis, and Sean Cousins, Need 5 more.

Wish List

Die Macher is a game of German elections. Have Andy Lewis, need 3 more.

Modern Art is a game of art trading. Have Andy Lewis and Caleb Cousins, need 3 more.

SolarQuest is a Monopoly-style game where the real estate consists of various planets and moons in the solar system. Have Bill Scharf and Andy Lewis, need 4 more.

Dune. You know this one. Since Paul Bolduc was kind enough to supply me with the Ixians and Bene Tleilaxu, this can take up to 9 players. Please submit preference lists when you sign up. Have Kevin Wilson, Bill Scharf, Andy Lewis, and Ward Narhi.

Stellar Conquest is a game of stellar exploration and colonization. This uses a new map and a number of variants. Need 6.

Note that a subscription to S.O.B. is not required to play in a game run by flier, but that a game fee will be charged to non-subbers.

S.O.B. is a zine of unusual postal games, and anything else I feel like including. Your publisher is:

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Subscriptions cost \$1.00 per issue (\$1.50 overseas).

Howling at the Moon

The S.O.B. Letter Column

Ward Narhi

I have heard rumors that you won the Runestone Poll! Is this correct? Congratulations! Quite a coincidence that the first year I decide to vote is the year you win it all! You can send me my money at any time. Although I don't play too many games in SOB I really like the diversity in it and of course what probably put you over the top was the color (ah, such remarkable plumage). The only thing I think SOB lacks is a larger letter column. So come on out there, write a letter!

[I did in fact with the Runestone Poll, and I'm still a little in shock over it. Thanks for giving me such high marks. No doubt the color did contribute. It

even (as Paul Bolduc put it) allowed me to "beat the 'Whining Pig' [aka Doug Kent] despite his legion of toadies."]

Murray Cowles

Thank you for your helpful press regarding my WWW games. Like you I am uncertain as to their value, if any, so I want to put the word about broadly and listen to the answers.

Looking forward to Avaloncon. Chris Geggus is coming over this year.

[One of these years I'll make it to Avaloncon. Unfortunately, this isn't the year..]

Bob Robles

How about that Communications Decency Act! Let's all e-mail some pornography to your Congresscritter and let them know where you stand on Internet "Decency". Seriously, did anybody care about the defeat of the CDA? IMHO, the court did a nice job in rebutting the arguments of the

buttheads advocating making the I-bahn a "safe place for children". The world is not a nice place. If you're worried about your kids then help them out, be a parent. *[Amen to that. When I heard of the court's decision, some small measure of my faith in the government was restored. The arguments the court used were masterful.]*

Rude Dog / MGN# O/B/8/CH/1 - Gunboat**Spring 1459****Deadline/Summer 1459 6/20 Thursday**

Ducats fly as the Pope opens the coffers to Venetian troops, causing them to defect en mass. France and Venice meanwhile quietly reshuffle their northern troops while France continues his assault on the Turks, joined, somewhat less successfully, by Naples.

Spring 1459 Retreats

Turkish F6 retreats to the Tunis

Expenditures

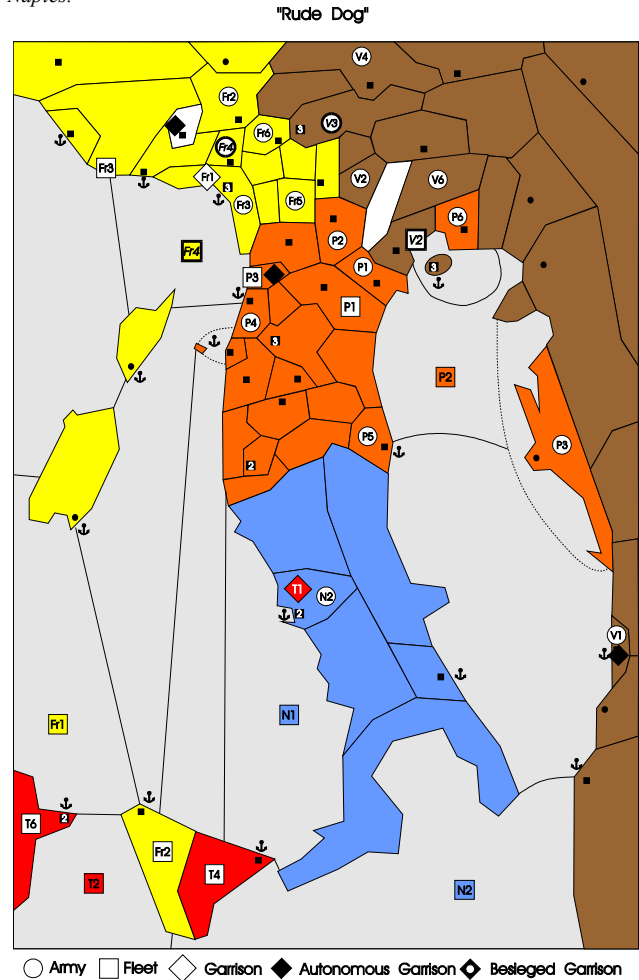
Venice spends 3 ducats to counterbribe F1

The Papacy spends 21 ducats each to buy Venetian F1 and A5

Orders

- France(): A2 Avignon to TURIN
A3 FornoVA to GENOA
A4 (EM) MONTFERRAT supports A2
A5 Cremona to PARMA
A6 Turin to PAVIA
F1 WESTERN MEDITERRANEAN supports F2
F2 Western Tyrrhenian Sea to PALERMO
F3 SAVOY to PROVENCE(SC)
F4 (CM) Western Gulf of Lyon to EASTERN GULF OF LYON
G1 GENOA holds
- Naples(): A2 NAPLES besieges
F1 GULF OF NAPLES to Messina
F2 IONIAN SEA supports F1 (cut)
- Papacy(): A1 FERRARA TO Padua
A2 Modena to MANTUA
A3 Ancona to DALMATIA
A4 PISA holds
A5 Urbino to ANCONA
A6 Padua to TREVISO
F1 BOLOGNA supports F2
F2 UPPER ADRIATIC transports A3
F3 LUCCA hold
- Turks(): F2 BAY OF TUNIS to Ionian Sea
F4 MESSINA supports F2 (cut)
F6 TUNIS holds
G1 NAPLES CONVERTS TO A1
- Venice(): A1 Albania to RAGUSA
A2 Trent to BRESCIA
A3 (EM) Como to MILAN
A4 Milan to TYROLEA
A5 Padua to Verona (nsu)
A6 Carinthia to VICENZA
F1 Upper Adriatic holds (nsu)
F2 (EM) Venice Lagoon to PADUA

If you are in the game, a red check will appear next to the country you are playing.

**Press**

France - Papacy: I really don't want to fight.

France - Venice: I really don't want to fight.

Milan - All: Good riddance. I'm glad to be out of the game.

Naples - benefactor: Thanks Bud! This will come in handy...heh, heh.

Pope - Venice: You had to know it was coming!

Pope - France: You, my dear sir are the swing vote. Will you attack me or move on Venice? Obviously I vote for you joining me in attacking Venice. He is richer than I, you can get Milan's home territories out of it, and Venice already owns half the board. I want you to grow as well.

Pope - All: I have divested myself of the majority of my wealth. The Doge is now the richest and largest man on the board.

Pope - Venice: Loan? Ha! Your income is higher than mine and the only reason I had more than you was because I was so frugal. From now on I plan on being a wastrel!

The River / MGN# O/B/8/AD2/1

End of Game Statements

Game Summary

Country	Start	1454			1455			1456			1457			1458		
		Spr	Sum	Fal	Spr	Sum	Fal	Spr	Sum	Fal	Spr	Sum	Fal	Spr	Sum	Fal
Austria:	3	3	5	6	6	6	7	7	8	10	11	9	10	7	10	9
Florence:	3	3	3	3	4	5	5	6	5	3	5	7	7	7	8	8
France:	3	4	5	6	6	7	6	6	5	4	4	4	7	8	9	9
Milan:	3	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0
Naples:	4	4	4	4	4	4	4	4	3	4	4	3	4	3	4	6
Papacy:	4	4	3	4	4	4	2	1	2	3	2	1	1	1	1	1
Turks:	3	3	4	4	5	4	6	6	7	6	7	6	4	5	0	0
Venice:	4	4	5	5	7	7	9	9	11	12	9	11	10	12	9	10

Country	1459			1460			1461			1462
	Spr	Sum	Fal	Spr	Sum	Fal	Spr	Sum	Fal	Spr
Austria:	10	8	8	8	8	8	8	6	5	6
Florence:	9	9	8	7	6	7	5	3	0	0
France:	9	10	11	12	12	11	12	14	17	19
Milan:	0	0	0	0	0	0	0	0	0	0
Naples:	7	7	9	9	10	10	12	14	16	14
Papacy:	0	0	0	0	0	0	0	0	0	0
Turks:	0	0	0	0	0	0	0	0	0	0
Venice:	10	10	8	8	8	8	7	7	6	4

The Players

AUSTRIA:	Ray Grib	3rd place	7
FLORENCE:	Ben Katz (resign, Summer 1454), Mike Scott (out, Fall 1461)	5th place	3
FRANCE:	Ken Marcinonis	1ST PLACE	10
MILAN:	Keith Sesler (out, Spring 1455)	5th place	3
NAPLES:	Cliff Woodhall (drop, Summer 1456), Lee McConnell	2nd place	9
PAPACY:	Mike Quist (drop, Spring 1457), Stuart Schoenberger (out, Spring 1459)	5th place	3
TURKS:	Dave Anderson (out, Summer 1458)	5th place	3
VENICE:	Pete Palumbo	4th place	6

Statements

Ken Marcinonis (France): This was my first Mach game and I found it very interesting. The original plan was for Austria (Ray) and I to team up and take out Milan and then work our way south. Milan went down as planned and that is when the plan ended. Venice (Pete) persuaded Ray to turn against me and I was nearly crushed. That move almost allowed Pete to run away with the game. That is when Lee took over for Naples and convinced most of the powers to turn against Pete (including Ray). That allowed me to stay alive and fight another day. Now that Ray and I had a truce Ray 'redefined' our mutual border with him getting a larger slice. In return for Naples's efforts, I helped him eliminate Turkey with support and ducats. Lee and I then decided to take on Florence (Mike). Mike did try diplomacy to save his position but Lee and I were skeptical Mike would become an ally and when Mike didn't do what he said he would we both attacked. With Florence in death throes I turned my attention east. I still needed another country and thought Milan would work. I was in contact with Pete who would help me against Ray. I figured I would attack Ray and then stop and settle for Milan. The flaw was that Pete was in some of Milan and I figured he would not willingly give me Milan. That is when I worked with

Naples to acquire Florence. Obviously the plan worked and I gained the win. I owe a lot of thanks to Lee for 1) Saving me earlier in the game and 2) For helping me acquire Florence for the win. Oh and Ray, castrate me? You nearly did me in, but you know that would have allowed Venice to win the game. You should not have attacked me, we could have ruled the world together. It would have been glorious!

Lee McConnell (Naples): Thanks to all players for a very interesting game. Special thanks to Ken Marcinonis, a trusted and loyal ally. Congratulations, Ken!

Jason Wilke (Original GM):

To the GM: Another ended? FRENCH victory? Hmm.

To the Players: Okay. Which of you will sign up to my next Mach game?

Chris Hassler (GM): This was a fun game to run. It had plenty of excitement and the players by and large were quite reliable. The ending was classic Machiavelli. Congratulations to Ken on his well deserved win.

Rabid Dog / MGN# O/E1/9/ABC/1**Summer 1452****Deadline/Fall 1452 8/29 Thursday**

The noose starts to close around Milan as its capital is besieged and the relieving army fades away. The Pope turns his attention toward the hoards on his southern borders while the Turk takes advantage of Venetian confusion on the high seas.

Spring 1452 Retreats

French A1 retreats to Turin.

Naples A1 retreats to Tivoli.

Expenditures

France spends 12 ducats to disband Milan A3

Orders

Austria: A1 MILAN besiege
(Koehler) A2 (EM) Tyrolea to COMO
A3 Slavonia to CARNIOLA
A4 Croatia to BOSNIA

France: A1 Turin to PAVIA
(Wilke) A2 GENOA to Montferrat
A3 Savoy to PROVENCE
F1 WESTERN GULF OF LYON supports F2
F2 CORSICA supports F1

Milan: A1 Saluzzo to TURIN
(Anderson) A2 MONTFERRAT supports A1 (cut)
A3 Pavia to Milan (nsu)
A4 PAVIA supports A2
G1 MILAN supports A3 (nsu)

Naples: A1 TIVOLI supports A3
(Narhi) A2 ROME converts to G1
A3 Capua to SPOLETO
F1 SARDINIA to WESTERN Tyrrhenian Sea
F2 Tunis to WESTERN MEDITERRANEAN
F3 NAPLES holds
F4 Eastern Tyrrhenian Sea to SIENNA
F5 WESTERN TYRRHENIAN SEA to Piombino

Papacy: A1 (EM) PERUGIA supports A3
(Rutherford) A3 Spoleto to ROME
A4 Bologna to FLORENCE
F1 Ferrara to BOLOGNA
F3 PISA to Piombino

Turks: A1 AQUILA supports A2
(Wilson) A2 ANCONA supports Neapolitan A3 to Spoleto
F1 Lower Adriatic to DALMATIA
F2 OTRANTO supports F4
F3 IONIAN SEA supports F4
F4 DURAZZO to LOWER ADRIATIC

Venice: A1 Padua to FERRARA
(Robles) A2 TRENTO supports Austria A1
A3 Vicenza to VERONA
F1 (EM) UPPER ADRIATIC holds (illegal conditionals received)
F2 VENICE LAGOON holds (illegal conditionals received)

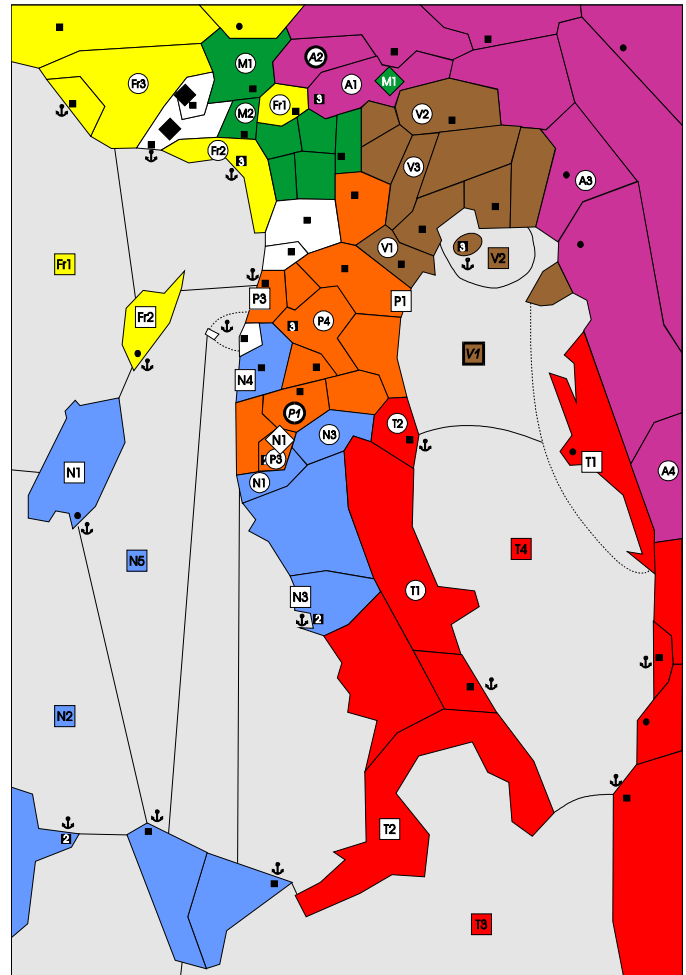
Press

France - Naples: We agreed on peace, right?

France - Milan: Still quiet?

France - Papacy: Slick move ... and good timing. I'm impressed. He refused to help, so might as well take him out...

"Rabid Dog"



○ Army □ Fleet ◇ Garrison ◆ Autonomous Garrison ◊ Besieged Garrison

Naples - Turk: I hope you deserved the trust I put in you this turn.

Naples - France: Convinced of my pro-French attitudes yet?

Naples - Rome: We only follow the religious advice of the Naples Prophet. You, good sir, are an impostor. Rome was such a nice city we decided to stay. The papal twinkies are especially tasty.

Naples Prophet: Did I not predict Genoa's demise last turn, and even by France's (the snailman) hand? Does this not conclusively prove I am the proper agent of God or do you yet cling to the apostate Pope?

The Pope speaks *ex catledna*: "Plague sucketh."

Pope - Austria: The referee awards two points for a takedown.

Pope - France: Define "controlling".

Murad II - Naples: You were right, Ancona was a quagmire. The Janissaries have cleaned the place up a little, may we offer similar help with Spoleto?

Murad - Pope: What is a Hail Mary? And I don't think I have room in my harem for 20 of them anyway.

Murad II - Austrian Duke: Dalmatia is mine I tell you, stay away.

"Mongrel"**Epoch IV Empire Selection****Deadline for Epoch IV Guptas, Goths, and Huns: 8/29 Thursday****Gamers' Lonely Hearts Club** (Anderson) keeps**Hector** (Cowles) gives to the Hoard**Civs-R-U's** (Lewis) keeps.**Horsemen of the Apocalypse** (Wilson) keeps**The Hoard** (Hurley) gives to Hector**The Dark Side** (Eisenhut) keepsPlayers

Player Name	Player Faction Name	Empire Strength Points	Victory Points
Dave Anderson	Gamers' Lonely Hearts Club	18	39
Murray Cowles	Hector	19	49
Andy Lewis	Civs-R-U's	20	48
Kevin Wilson	Horsemen of the Apocalypse	20	41
Chris Hurley	The Hoard	35	73
Dan Eisenhut	The Dark Side	37	52

Final PositionsSUMERIANS: Capital and 3 armies in *Lower Tigris*.**The Hoard.** Fleets *Red Sea* and *Black Sea*. EGYPT: One army each in *Nubia* and *Upper Nile*. PERSIA: Armies each in *Eastern Deccan* and *Nile Delta*. CIVIL WAR: Army *Chekiang*. MACEDONIA: Army each in *Baltic Seaboard*, *Danubia*, and *Libya*.**Civs-R-U's.** ASSYRIA: Two armies in *Hindu Kush*. CELTS: Army *Northern Gaul* and *Dneiper*.**The Dark Side.** Fleets *Western Mediterranean*, *Eastern Mediterranean*, and *North Sea*. CIVIL WAR: Army *Ceylon*. CARTHAGINIA: Armies *Southern Iberia* and *Crete*. MAYANS: Army and Capital *Central America*, army *Guiana Highlands*. ROMANS: Army, Capital, and Monument *Southern Apennines*, army and Monument each in *Albion*, *Shatts Plateau*, and *Middle Tigris*, army each in *Western Iberia*, *Pyrenees*, *Central Massif*, *Western Gaul*, *Northern Apennines*, *Dalmatia*, *Central Europe*, *Pindus*, *Balkans*, *Morea*, *Western Anatolia*, *Levant*, and *Palsetine*.**Horsemen of the Apocalypse.** CHOU DYNASTY: Army in *Tarim Basin*. MAURYA: Army, Capital, and Monument *Ganges Delta*, army *Ganges Valley*, *Irrawaddy*, and *Malayan Peninsula*.**Hector.** VEDIC CITY STATES: One army each in *Western Deccan* and *Eastern Ghats*. NORTH AMERICAN MIGRANTS: Army each in *West**Indies* and *Great Plains*. SASSANIDS: Army, Capital, and Monument in *Zagros*, army, city, and Monument in *Persian Plateau*, army and Monument each in *Eastern Anatolia*, *Upper Tigris*, *Lower Indus*, and *Upper Indus*, army *Persian Salt Desert*.**Gamers' Lonely Hearts Club.** ARYANS: Two armies in *Turanian Plain*. SCYTHEANS: Army *Caucuses*. HSUING-NU: Army, city, and Monument each in *Wei River* and *Yellow River*, army each in *Mongolia* and *Great Plain of China*.

Your event cards

are: _____

Epoch IV Empire Draw

Your Empire is: _____

"Wolfpack"**Epoch II Scytheans, Carthagina, and Persia****Deadline for Epoch III Empire Selection: 8/29 Thursday****Dead Peoples:** SCYTHEANS: Army in *Caucuses*. Plays Surprise Attack, army *Eastern Anatolia* (vs. Hittites: S: 3, 3; H: 6; loses), *Eastern Anatolia* (vs. Hittites: S: 6, 5; H: 4, 1; wins, Capital reduced to city), *Levant* (vs. Phoenicians: S: 6, 1; P: 2; wins, Capital reduced to city), *Upper Tigris* (vs. Assyrians: S: 3, 1; A: 5; loses), *Upper Tigris* (vs. Assyrians: S: 4, 4; A: 3; wins, Capital reduced to city), *Zagros* (vs. Assyrians: S: 6, 2; A: 4; wins). Builds Monument *Eastern Anatolia*. Points: Dominance in Middle East (6), Presence in India (2), 3 cities (3), and 3 Monuments (3) for 14 points.**The Blunt Approach** plays Rebellion in *Nubia* (vs. Egypt: R: 6, 2; E: 6; R: 6, 1; E: 2; R: 3, 1; E: 6; loses). Plays Barbarians in the *Syrian Desert*. *Levant* (vs. Scytheans: B: 4, 3; S: 1; wins, city eliminated), *Upper Tigris* (vs. Scytheans: B: 6, 4; S: 5; wins, city eliminated), *Palestine* (vs. Egypt: B: 5, 1; E: 4; wins), *Middle Tigris* (vs. Babylonia: Bar: 6, 3; Bab: 5; Bar: 3, 2; Bab: 6; loses). CARTHAGINIA: Capital and army in *Shatts Plateau*, *Libya*, *Nile Delta* (vs. Egypt: C: 6, 1; E: 4; wins, Capital reduced to city), *Nubia* (vs. Egypt: C: 2, 1; E: 1; wins), fleet *Western Mediterranean* (vs. Quantum Coyotes: B: 5, 3; Q: 5; B: 5, 2; Q: 2; wins), army *Arabian Peninsula* (vs. Egypt: C: 4, 1; E: 5; loses), *Arabian Peninsula* (vs. Egypt: C: 5, 1; E: 5; C: 3, 3; E: 6; loses), *Arabian Peninsula* (vs. Egypt: C: 5, 3; E: 6; loses). Points: Dominance in North Africa (4), Presence in Middle East (3), Southern Europe

(2), and China (2), 1 Capital (2), 1 city (1), 1 Monument (1), and 1 Sea (1) for 16 points.

Pinky and the Brain plays Pestilence in *Middle Tigris* (1 Babylonian army eliminated in *Middle Tigris*, 2 Sumerian armies eliminated in *Lower Tigris*). PERSIA: Plays Weaponry. Army and Capital in *Persian Plateau* (Aryan army retreats to *Hindu Kush*), army *Zagros* (vs. Scytheans: P: 5+1, 2+1; S: 6; P: 6+1, 1+1; S: 2; wins), *Middle Tigris* (vs. Babylonians: P: 3+1, 1+1; B: 1; wins, Capital reduced to city), *Eastern Anatolia* (vs. Scytheans: P: 1+1, 1+1; S: 1; wins, city eliminated), *Upper Tigris*, *Levant*, *Palestine*, fleet *Eastern Mediterranean* (vs. Quantum Coyotes: P: 4+1; 3+1; Q: 6; loses) *Eastern Mediterranean* (vs. Quantum Coyotes: P: 5+1, 4+1; Q: 5; wins), army *Persian Salt Desert* (vs. Assyrians: P: 3+1, 1+1; A: 1; wins), *Lower Indus* (vs. Assyrians: P: 4+1, 1+1; A: 4; P: 2+1, 1+1; A: 6; loses), *Lower Indus* (vs. Assyrians: P: 2+1, 1+1; A: 2; loses), *Upper Indus* (vs. Vedic City States: P: 6+1, 1+1; V: 5; wins, Capital reduced to city), *Morea*, *Nile Delta* (vs. Carthagina: P: 5+1, 1+1; C: 5; wins, city eliminated). Builds Monument in *Persian Plateau*. Points: Dominance in India (4) and Middle East (6), Presences in North Africa (2) and Southern Europe (2), one Capital (2), two cities (2), 8 Monuments (8), and one Sea (1) for 27 points.

Player Name	Player Faction Name	Empire Strength Points	Victory Points
Debbie Osborne	Moody Indignats	10	23
Paul Bolduc	The Arachnids	11	29
Kevin Kinsel	Quantum Coyotes	12	28
Chris Geggus	The Blunt Approach	12	24
Caleb Cousins	Dead Peoples	12	21
Sean Cousins	Pinky and the Brain	19	33

Final Positions

SUMERIANS: Capital and army in *Lower Tigris*.

The Arachnids: Fleet *Red Sea*. EGYPT: Army *Arabian Peninsula*. SUB-SAHARAN MIGRANTS: Army each in *Madagascar* and *Central Africa*. CHOU DYNASTY: Army, Capital, and Monument in *Wei River*, army and city in *Yellow River*, one army each in *Tarim Basin*, *Great Plain of China*, and *Chekiang*.

Quantum Coyotes: MINOANS: Army, Capital, and Fort in *Crete*. PHOENICIA: Army *Southern Iberia*. ASSYRIA: Armies *Eastern Ghats* and *Ceylon*.

Pinky and the Brain: Fleet *Eastern Mediterranean*. INDUS VALLEY: One army each in *Western Deccan* and *Western Ghats*. PERSIA: Army, Capital, and Monument *Persian Plateau*, army, city, and Monument each in *Upper Indus* and *Middle Tigris*, army and Monument each in *Eastern Anatolia*, *Lower Indus*, *Upper Tigris*, *Levant*, *Nile Delta*, army each in *Morea*, *Palestine*, *Zagros*, and *Persian Salt Desert*.

Moody Indignants: NILE KINGDOM: Army, city, and fort *Upper Nile*. VEDIC CITY STATES: Army each in *Ganges Valley*, *Ganges Delta*, *Eastern Deccan*, *Malayan Peninsula*, and *Sumatra*.

The Blunt Approach: Fleet *Western Mediterranean*. HITTITES: Army each in *Western Anatolia* and *Balkans*. SHANG DYNASTY: Army *Si-Kyang*. CARTHAGINIA: Army and Capital in *Shatts Plateau*, army each in *Libya* and *Nubia*.

Dead Peoples: ARYANS: Two armies in *Hindu Kush*, army *Turanian Plain*. SCYTHEANS: Army *Caucases*.

Your event cards

are: _____

Epoch III Empire Draw

Your Empire is: _____

Mutt

Turn 3

Deadline, Turn 4: 8/29, Thursday

Commander Actions

Minos Entrepreneurs passes

Heavenly Bodies Development Company opens the bidding on a nodule for 27 and gets it (Or1, Or2, Or3, Or3, Wa8, Wa10).

Bellpick 7 buys one population factor (Or3, Wa9)

Tribute to Troy buys a water factory for 20 (Or3, Or3, Or4, Or4, Wa6). Population factor moved from an ore factory to man it.

Awl Mining Company passes

BarterTown II passes

Fangland passes

The Outhouse opens the bidding on a Heavy Equipment at 31 and gets it (Wa4, Or4, Wa7, Wa7, Wa9).

The Players

Order	Outpost Name	Commander	Factories	Upgrades	VP
1	Heavenly Bodies Development Company	Kevin Wilson	OrF, OrF, OrF, WaF	DL, No	7
2	Bellpick 7	Bill Scharf	OrF, OrF, WaF, WaF	No	6
3	Awl Mining Company	Andy Lewis	OrF, OrF, WaF	No	5
4	Tribute to Troy	Dan Eisenhut	OrF, OrF, WaF, WaF	No	5
5	Minos Entrepreneurs	Dave Anderson	OrF, OrF, WaF	Wa, DL	5
6	The Outhouse	Sean Cousins	OrF, OrF, WaF, WaF	HE	4
7	BarterTown II	Andy York	OrF, OrF, WaF, WaF	Wa	4
8	Fangland	Kevin Kinsel	OrF, OrF, WaF, WaF, WaF		3

Available Upgrades

New Arrivals: Heavy Equipment, Data Library

Upgrade	Minimum Bid	Available	Not Yet Delivered
Data Libraries (DL)	15	1	2
Warehouses (Wa)	25	2	1
Heavy Equipment (HE)	30	4	0
Nodules (No)	25	1	0

Notes

Thanks to Micheal Lowrey for his unused standby orders.

Production Cards

In the Warehouse: _____

New Cards: _____

Prairie Dog

Turn 20

Deadline End of Game Statements: 8/29 Thursday

Congratulations to Paul Bolduc for his victory.

Segment 1

- John Henry: Delay
- Ronnie: Delay
- Laundry Boy: Card B1 -- Advance (straight ahead), segment 1 of 1.

Segment 2

- John Henry: Delay
- Ronnie: Card (3) -- Turn (left to face F18), segment 1 of 1
- Laundry Boy: Card 2 -- Run (ahead left), segment 1 of 1.

Segment 3

- John Henry: Delay
- Ronnie: Card 5 -- Shoot (C45 at Laundry Boy), segment 1 of 2
- Laundry Boy: Card 1 -- Advance (straight ahead), segment 1 of 2

Segment 4

- John Henry: Delay
- Ronnie: Card 5 -- Shoot (C45 at Laundry Boy), segment 2 of 2, miss, target not in sight.
- Laundry Boy: Card 1 -- Advance (straight ahead), segment 2 of 2

Segment 5

- John Henry: Pass
- Ronnie: Pass
- Laundry Boy: Pass

End of Turn

- John Henry loses 2 delay points.
- Ronnie loses 1 delay point.

Aftermath

- Andy survives his serious wound
- John Henry survives his serious wounds.

Victory Points

- Andy: -8 (passed out, fired once, inflicted 2 serious wounds)
- John Henry: 2 (survivor)
- Ronnie: -6 (survivor, fired once, inflicted 2 serious wounds)
- Laundry Boy: 3 (survivor, knocked out Andy)

Prairie Dog

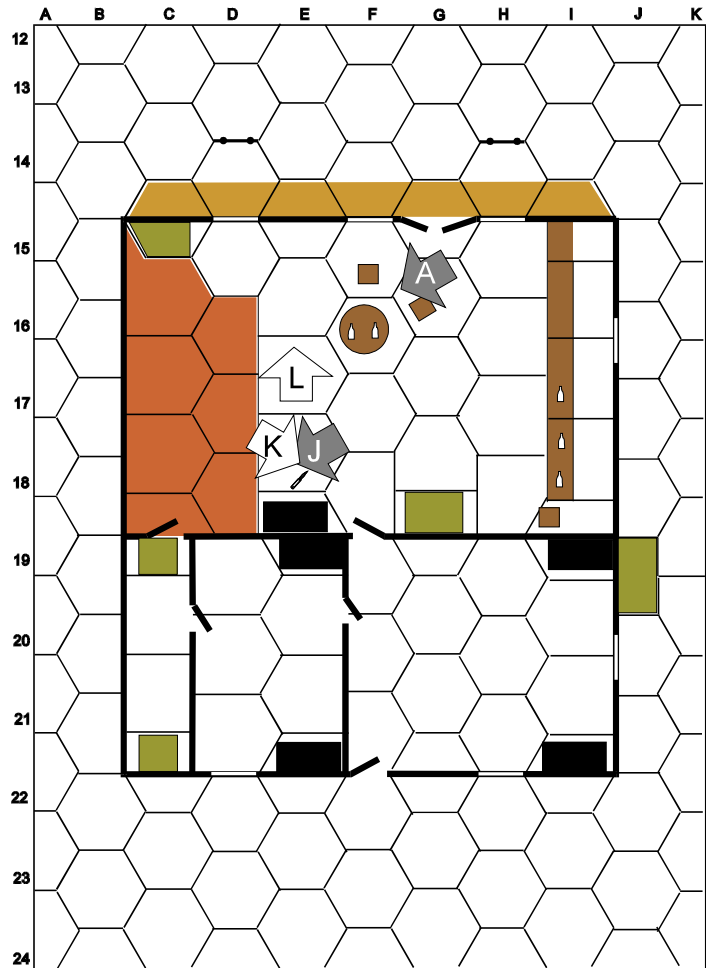


Table
 Chair
 Bottle
 Westerner

Westerners

Side	Player	Character	Location	Bonus Cards	Skills	Delay	Endurance	Comments
A	Dave Anderson	Andy (A)	G16 > F16	4, 6, 9	None	N/A	0	SERIOUS 1, UNCONSCIOUS
B	Steve Koehler	John Henry (J)	E18 > D18	5, 6, 8, 9	Brawling +2	2	2	GUN ARM 1, SERIOUS 3, LEG 4, DOWN
C	Mike Scott	Ronnie (K)	E18 > F18	5, 8	Brawling +2	0	6	
D	Paul Bolduc	Laundry Boy(L)	E17 > E16	1, 4, 5, 6, 7	Brawling +2	0	18	

Weapons

Character	Holstered	Gun Hand	Other Hand	Both Hands	Ammo
Andy	Knife	C45, cocked	Empty	Empty	C45: O O O O O
John Henry	C45, Knife	Empty	Empty	Chair	C45: O O O O O O
Ronnie	None	C45, cocked	Empty	Empty	C45: O O O O O
Laundry Boy	None	Empty	Empty	Empty	n/a

Dog Food

Turns 19 and 20

Deadline Turns 21 and 22: 8/29 Thursday

Turn 19

1st: Steve Koehler (Eepeeep/Basset Imports, Ltd.) Rolls Used: 6 * 4
Multi-Generation Ship - NC6 - Y - B - R - A - A - R20 - Y - B - R - B - Y - B - R - Poison Port(o) - B - Paintfall(o) - R30 - R - B - Y - B - R - B - Y - Open Port.

Sell Chicle Liquor for \$90 plus \$60 demand (from the cup: Servo-Mechanisms at 7b and Immortal Grease at 6). Sell two more Chicle Liquor for \$180 (from the cup: Psychotic Sculpture at 10 and Space Spice at 2). Buy 2 Impossible Furniture for \$220.

2nd: Andy Lewis (Humans)

Cash & Carrie Rolls Used: 2 3 4

Jewel Port(p) - Jump Start to TeleGate 4 - Y - B - NC4 - Open Port- NC4 - R - Y - Open Port.

Sell Servo-Mechanism for \$300 (from the cup: Chicle Liquor at 7a). Sell Pedigreed Bolts for \$200 (from the cup: Demand for Dust at 5).

Messy Wes Rolls Used: 2 2 5

Open Port - Y - R - NC5 - Open Port - NC5 - B - Y - TeleGate 4 - R.

3rd: Pete Gaughan (Whynoms/Appaloosa Limited Produce Organization)

Rolls Used: (4 * 2) 2 2

Dryport(p) - A - Y - R - NC4 - R - Y - B - Y - A - Whale Port(p).

Sell 2 Mulch Wine for \$120 (from the cup: Mulch Wine at 3 and Fare to Base at 7b). Buys 2 Immortal Grease for \$100. \$22 in commissions to Cash & Carrie.

4th: Andy York (Niks/Beagle Boys Enterprise) Rolls Used: 2 3 5

Open Port - NC2 - Galactic Base.

Deliver Fare for \$140 (from the cup: Demand for Sculpture at 2). Pick up Fare to 9a.

5th: Chris Geggus (Qossuth)

Rockville Emporium Rolls Used: 2 * 3

Y10 - A - (R) - B - Y - Airhome(p) - (R) - ? (It's TeleGate 3) - (R30) - ? (It's the Auto Pilot Relic).

Stops and picks up relic.

Rock Mart Rolls Used: 2 * 2

B - (Y) - B - R - B - (Y) - B.

6th: Dan Eisenhut (Dell)

Naga Trading Corp Rolls Used: 3 5

Rumbleport(p).

Sell 2 Servo-Mechanisms for \$600 (from the cup: Fare to 4a at Base and Impossible Furniture at 8). Buy Psychotic Sculpture for \$160. Receives \$76 in commissions.

Naga Subsidiaries, Inc. Rolls Used: 3 3

Rumbleport(p) - B - B - Rainfall(p) - B - R - Y.

Turn 20

1st: Steve Koehler (Eepeeep/Basset Imports, Ltd.) Rolls Used: 4 * 4
Open Port Y - B - R - B - Y - R - R30 - Paintfall(o) - B - Poisonport(p).

Sell 2 Impossible Furniture for \$360 (from the cup: Demand for Grease at 7b and Designer Genes at 9a). Buy 3 Bionic Perfumes for \$240. \$60 in port commissions to Rockville Emporium.

2nd: Andy Lewis (Humans)

Cash & Carrie Rolls Used: 1 1 3

Open Port - Y - R - NC3 - A - Whaleport(p).

Buys Wet Landing for \$200. Buys 2 Immortal Grease for \$100. Buys Shining Slime for \$100. Receives \$50 in factory commissions and \$40 in port commissions.

Messy Wes Rolls Used: 2 2 5

R - Poisonport(p).

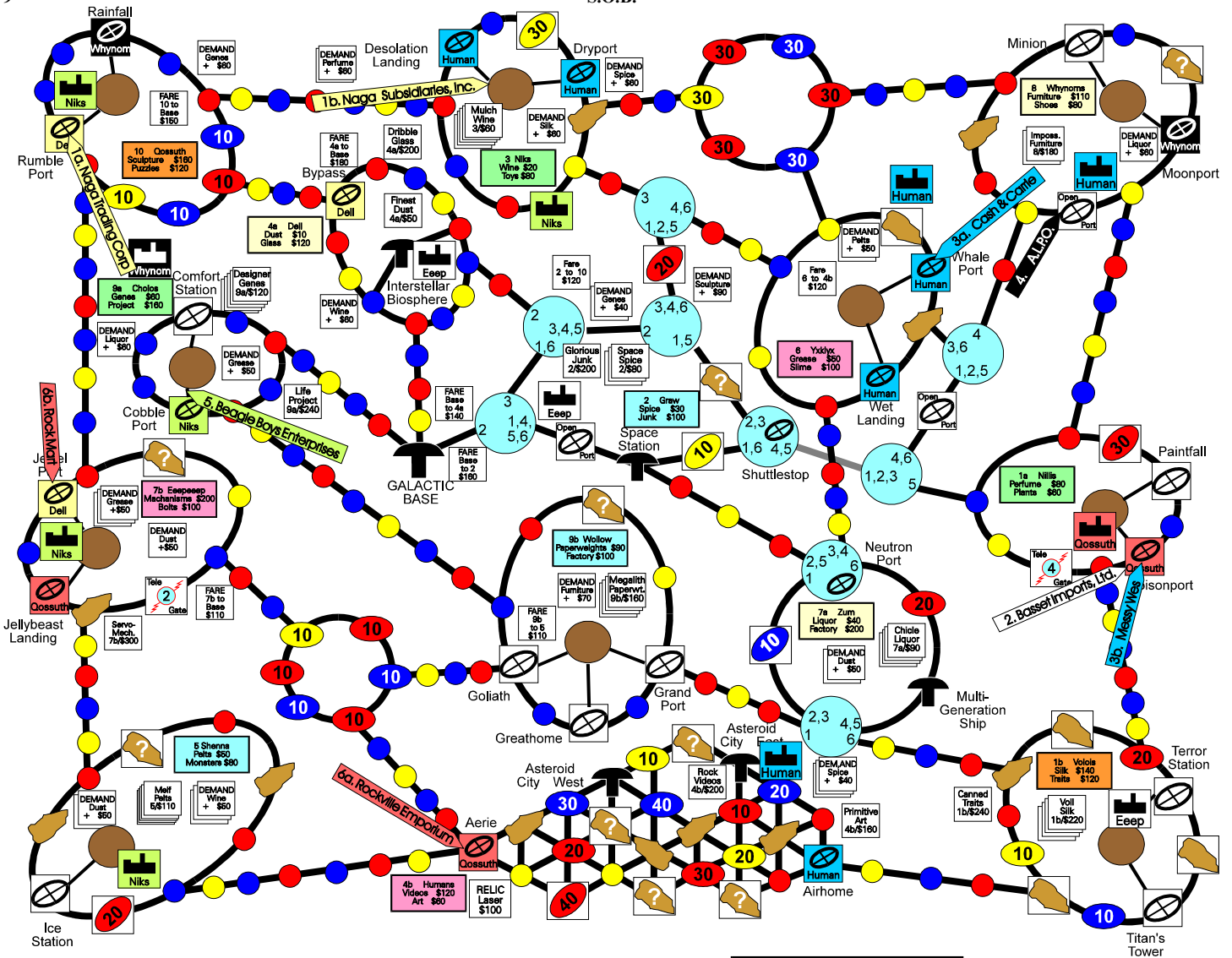
Sells 2 Impossible Furniture for \$360 (from the cup: Guard Plants at 1a and Mulch Wine at 3). Buys Guard Plants for \$60. Rockville Emporium receives \$42 in port commissions and \$30 in factory commissions.

3rd: Pete Gaughan (Whynoms/Appaloosa Limited Produce Organization)

Rolls Used: (4 * 2) 4 3

Whale Port(p) - A - NC4 - R - Y - Open Port.

Buys Moonport for \$160.



1a. Naga Trading Corp \$814		
Scow Scout		
21: 2 2 4 5 // 22: 1 4 6 6 (Use 2)		
Hold1	Hold2	Hull
Psycho. Sculpt. 10/\$250	Psycho. Sculpt. 10/\$250	Air Foil (\$80)
Bypass \$200	Jewelport \$200	Rumbleport \$200

1b. Naga Subsidiaries, Inc. \$310			
Scow Transport			
21: 1 2 6 6 // 22: 1 1 1 3 (Use 2)			
Hold1	Hold2	Hold3	Hull
Mulch Wine 2/\$60			

2. Basset Imports, Ltd. \$310			
Rocket Transport			
21: 2 5 // 22: 1 2 (Use 1 * 4)			
Hold1	Hold2	Hold3	Hull
Bionic Perfume 1a/\$140	Bionic Perfume 1a/\$140	Bionic Perfume 1a/\$140	Shield (\$60)
Graw \$200	Dell \$200	Volois \$200	

3a. Cash & Carrie \$944				
Normal Transport				
21: 1 6 6 // 22: 2 5 6				
Hold1	Hold2	Hold3	Hull	
Immortal Grease 6/\$100	Immortal Grease 6/\$100	Shining Slime 6/\$200	Switch Switch (\$100)	
Whynom \$100	Airhome \$200	Human \$100	Shield (\$60)	
Dryport \$200	Whaleport \$200	Ykdyx \$200	Jump Start (\$120)	
Desolation Landing \$200	Wet Landing \$200			

3b. Messy Wes Normal Scout		
21: 2 3 6 // 22: 1 2 5		
Hold1	Hold2	Hull
Guard Plants 1a/\$140		Shield (\$60)

4. A.L.P.O. \$376		
Fast Clipper		
21: 1 3 6 // 22: 2 5 6 (Double one)		
Hold1	Hold2	Hull
Immortal Grease 6/\$100	Immortal Grease 6/\$100	Shield (\$60)
Moonport \$200	Rainfall \$200	

5. Beagle Boys Enterprises \$455		
Sports Scout		
21: 3 3 5 5 // 22: 2 4 6 6 (Use 3)		
Hold1	Hold2	Hull
Shenna \$100	Eeep \$100	Qossuth \$200
Niks \$200	Cobbleport \$200	

6a. Rockville Emporium \$652		
Torch Scout		
21: 4 // 22: 5 (Times 3)		
Hold1	Hold2	Hull
Rock Videos 4b/\$200	Rock Videos 4b/\$200	Shield (\$60)
Nilla \$100	Poisonport \$200	Red Top (\$120)
Aerie \$200	Jellybeast Landing \$200	Auto Pilot [4] (\$80)

6b. Rock Mart Torch Freighter				
21: 1 // 22: 5 (times 2)				
Hold1	Hold2	Hold3	Hull	
Finest Dust 4a/\$50	Finest Dust 4a/\$50	Finest Dust 4a/\$50	Yellow Dice (\$80)	
Hold4	Hold5			
Finest Dust 4a/\$50				

4th: Andy York (Niks/Beagle Boys Enterprise) Rolls Used: 4 4 5
Galactic Base - R - B - Y - B - R - B - R - Cobbleport(o) - Cobbleport(s).

Deliver Fare for \$110 (from the cup: Liquor at 7a). Sell Immortal Grease for \$100 plus \$100 demand (from the cup: Demand for Genes at 2 and Fare to 4b at 6). Buys Cobbleport for \$200.

5th: Chris Geggus (Qossuth)
Rockville Emporium Rolls Used: 5 * 3

A - Y - (R30) - Y - Aerie(p).

Sell Space Spice for \$80 plus \$160 demand (from the cup: Fare to 2 at Base and Psychotic Sculpture at 10). Sell Space Spice for \$80 plus \$120 demand (from the cup: Space Spice at 2 and Impossible Furniture at 8). Buy 2 Rock Videos for \$240. Receives \$68 in commissions.

Rock Mart Rolls Used: 2 * 2

B - R - Jewelpport(p).

Sell Finest Dust for \$50 plus \$100 demand (from the cup: Demand for Spice at 4b and Demand for Liquor at 8). Buys Jellybeast Landing for \$200. Naga Trading receives \$35 in commissions.

6th: Dan Eisenhut (Dell)

Naga Trading Corp Rolls Used: 6 6

Rumbleport(p).

Buy Psychotic Sculpture for \$160. Receives \$16 in commissions.

Naga Subsidiaries, Inc. Rolls Used: 3 3

Y - B - R - B - Y - B - R - Desolation Landing(p) - Desolation Landing(s).

Sell Psychotic Sculpture for \$250 (from the cup: Space Spice at 2). Buy Mulch Wine for \$20.

In the Doghouse with Marmaduke

Not nearly as much action to report this time; everything is kind of bubbling building to Avaloncon; so I'll just post tidbits.

- * Siedler is supposedly now available from Mayfair.
- * I'm still open to game suggestions if people want more to play.
- * Air Baron from Avalon Hill seems like a very nice family style game.
- * Carrie and I just got a shipment of British games - Really Nasty Horse Race, Formula Motor Racing, Wembley, and Fireside Football. All are very nice not too long multi player games; recommend all.
- * On that note, there is a new source for overseas games; it's called European Game Source. The easiest way to contact them is email at EuroGS@aol.com. I just got a price list from them this morning; complete selection and very good prices.
- * Saratoga, a tournament game (2 hours to play), is scheduled for release in September from GMT. It is available as a pre-order now for \$20 instead of the release price of \$29. Why am I hyping this already? I am the developer of the game. It's a fun game that is easy to play but has some interesting rules like tactics chit play but must have a leader and an open flank to be able to select from all 8 chits. It will be sold at the Saratoga National Park.

- * Stonewall's Last Battles is a new release from Avalon Hill in the American Civil War series. A long time friend of mine designed it (series designer is Joe Balkoski). He included his email address from questions, comments, and/or suggestions in the rulebook so there is close to instant response instead of the Avalon Hill normal of months.
- * A further comment about the time to answer Avalon Hill questions since I'm the Across 5 Aprils answer man. Avalon Hill only forwards questions to their answer people on an infrequent basis. With my A5A info packet for Avaloncon, I received the latest set of questions - there were two letters. One was from February. So if you send a question to AH and don't get a response right away, you may still get it just be patient and don't shoot the answer man; we weren't the reason for the delay normally.

Stand-bys:

Dog Biscuit: Rich Goranson

Rin Tin Tin: Ward Narhi, Paul Bolduc

A big thank you to Paul Bolduc for his quick return of stand-by orders in Rin Tin Tin which went unused.

"Dog Biscuit"

Turn 6

GM: Andy Lewis

Deadline for Turn 7 is August 25, Sunday

My mistake last turn. The Spider's goalie is Trapper John. The value of 4 was correct.

Results

Bolduc's Spiders play Narhi's Nordic Bunwamers

Guy Whiz unwraps Ian Jury 1-0

Napoleon Bonapuck is out generated by Stonewall Jackson 1-0

Tex Hitter [replaced by Le Sainte {6}] and Ice Capone have a standoff 1-0

Snow Howe is out iced by Superstar 1-1

Jake Skate is sharpened by Jock Strappe 1-2

Trapper John is out foxed by Cardinal Finner {dr6} 1-3

Bunwarmers win! 3-1

Blendor's Barbarians Trade Fat Trick to Dynamo Sporck for Cyclone Henri

Narhi's Nordic Bunwarmers play Ms. Nar's Aquanuts

Cardinal Finner blesses Tiny Tim 1-0

Ian Jury is toppled by Sir Stanley Kup 1-1

Ice Capone slices Captain Hook [replaced by Frosty Todd {1}] 2-1

Jock Strappe is speared by King Neptune 2-1

Stonewall Jackson lets Chairman of the Boards {dr6} through 2-2

Superstar punches out Charge Kard 3-2

Bunwarmers win! 3-2

Anderson's Chicken Littles play Ms. Nar's Aquanuts

Crease Lightning zaps Sir Stanley Kup 0-0

Fast Eddy cancels Charge Kard 1-0

Swede Sixteen is fired by Chairman of the Boards 1-1

Old Man Winters freezes Tiny Tim 2-1

Kroz Czech is swamped by King Neptune 2-1

Moose butts Frosty Todd 3-1

Chicken Littles win! 3-1

Ms. Nar's Aquanuts Trade Tiny Tim to Hansen Brothers for Headlock Holmes

Dynamo Sporck play Hansen Brothers

Fat Trick is outweighed by Puk Luk 0-1

Puck Rogers and Slash Gordon experience solar glare 0-1

Canada Post eats up Hi Stick {dr2} 0-1

Antoni Zamboni outmaneuvers General Icinghower 1-1

Ivan Fazov {dr5} stumbles by Stu Late 2-1

Friar Puck overlooks Tiny Tim 3-1

Sporck win! 3-1

Hansen Brothers Send Stu Late to the minors and promote Moby Stick (9)

C.J.'s Cleavers Send P. Shooter to the minors and promote Cheap Skate {1}

Press

Bunwarmers getting red hot!! Going for second win in a row! Aquanuts getting that sinking feeling?! <Actually you managed three wins in a row to move into a second place tie!>

The Teams

Team	Manager	Record	Forwards	Defense	Goalie	Trades	Drafts	Games
Bolduc's Spiders	Paul Bolduc	2-2-1	F1: Guy Whiz 7 F2: Napoleon Bonapuck 4 F3: Snow Howe 3	D1: Le Sainte 6 D2: Jake Skate 2	G: Trapper John (4)	2	1	3
Blendor's Barbarians	Chris Hassler	0-5-0	F1: Bobby Howl 5 F2: Cyclone Henri 6 F3: Doc Holiday on Ice 4	D1: Cheap Shot b2 D2: Gay Blade 1	G: Bo Legs (2)	1	3	2
Narhi's Nordic Bunwarmers	Ward Narhi	3-1-0	F1: Ian Jury 1 F2: Superstar * F3: Jock Strappe 4	D1: Cardinal Finner 5 D2: Ice Capone b4	G: Stonewall Jackson(6)	1	1	3
Anderson's Chicken Littles	Dave Anderson	4-8-1	F1: Old Man Winters 4 F2: Swede Sixteen 5 F3: Fast Eddy 6	D1: Kroz Czech 4 D2: Moose 3	G: Crease Lightning(10)	1	1	3
Ms. Nar's Aquanuts	Sonja Nar	3-2-0	F1: Frosty Todd 1 F2: Captain Hook 2 F3: Sir Stanley Kup 5	D1: Headlock Holmes 5 D2: Charge Kard 3	G: King Neptune (7)	2	0	3
Dynamo Sporck	Caleb Cousins	2-0-0	F1: Ivan Fazov 2 F2: Fat Trick 2 F3: Puck Rogers 7	D1: Antoni Zamboni 7 D2: Friar Puck 6	G: Canada Post (5)	2	1	3
Hansen Brothers	Sean Cousins	3-3-1	F1: Puk Luk 3 F2: General Icinghower 3 F3: Slash Gordon 7	D1: Hi Stick 6 D2: Tiny Tim ½	G: Moby Stick (9)	1	2	3
C.J.'s Cleavers	Chris Geggus	2-0-1	F1: Robin Hooker 4 F2: Cheap Skate 1 F3: Phantom of the Ice 6	D1: Iron Orr 7 D2: Boney Maloney 2	G: Bulldog Brown (3)	2	1	3

Teams are listed in the order in which they will take their turns.

“Rin Tin Tin”

Turn 4

GM: Andy Lewis

Deadline for Turn 5 is August 25, Sunday

Turn 4

Brendan's player-turn

(Your post arrived on 7/24 FYI)

Production: Brendan returns 3 Bricks and 1 Wool to the "bank" moves the robber to O9 and robs a Lumber from Caleb. Next, he reveals a knight card and moves the robber again to H11 and robs Caleb of Lumber.

Trades:

Actions: Upgrade to a city at H8/F4/M5

Caleb's player-turn

Production: Ore(Brendan[2], Caleb), Wool(Kevin)

Trades: None

Actions: None

Chris' player-turn

Production: Lumber(Caleb, Kevin)

Trades: 4 Grain for 1 Brick

Actions: None

Kevin's player-turn

Production: Grain(Brendan[2], Chris), Ore(Brendan[2])

Trades: 3 Wool for 1 Brick

Actions: Builds road at P5/O2

Brendan (D)

Caleb (R)

Chris (S)

Kevin (B)

Robber R

City (C)

Settlement (S)

road (R)

Wasteland (W)

Farmland (Grain) (G)

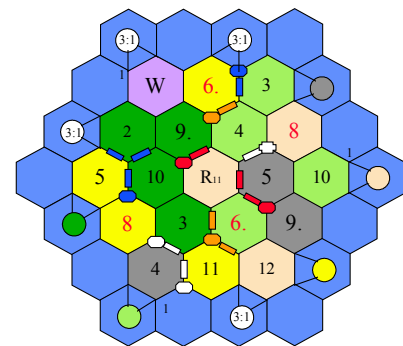
Hills (Brick) (H)

Pasture (Wool) (P)

Forest (Lumber) (F)

Mountains (Ore) (M)

Rin Tin Tin Turn 4



Cards at End of Turn 4

	Grain	Brick	Wool	Lumber	Ore
Brendan	2	--	--	2	4
Caleb	1	--	--	1	1
Chris	1	1	2	--	--
Kevin	1	--	2	1	--

Turn 5 Production Die Rolls

Brendan's player-turn: 6 Caleb's player-turn: 7
 Chris' player-turn: 8 Kevin's player-turn: 7

Trivia Quiz

You get 2 points for a solo answer, 1 point for sharing the correct answer with one other person, and ½ point for sharing the answer with two or more people. Every 10 points earns you a free issue.

And so, without further ado, the answers to last issues questions:

Q1. What was the most widely manufactured aircraft of World War II?

A1. The Douglas DC-3, also known as the C-47 Dakota. Over 35,000 were produced for the war, and over 1000 of those are still flying.

Bob Robles receives 2 points.

Q2. Who coined the term *blitzkrieg*?

A2. The term *blitzkrieg* was first used in the September 28, 1939 issue of *Time* magazine.

No correct answers.

Q3. What disease caused the most casualties (military and civilian) in World War II?

A3. Typhus, a disease spread by body lice.

No correct answers.

Q4. Of all the material sent by Lend Lease to Russia in 1941 and 1942, four things were deemed by the Russian generals to be the most useful. What were they?

A4. 100 octane aviation fuel, trucks, waterproof telephone wire, and radios.

No correct answers.

Q5. What country was the first to have paratrooper units?

A5. The Soviet Union had the first organized paratrooper units as early as 1932. They were never very good, however.

Dave Anderson, Caleb Cousins, and Chris Geggus each receive ½ point.

Current Scores

Chris Geggus	20	Andy Lewis	19½
Paul Bolduc	13	Steve Koehler	7½
Andy York	7	Dan Eisenhower	5½
Rich Goranson	4½	Bob Robles	4½
Bill Scharf	4½	Dave Anderson	4
Kevin Wilson	3½	Caleb Cousins	3
Kevin Kinsel	2½	Ward Narhi	2½
Berry Renken	2	Debbie Osborne	1

New Questions

Topic: World War II (yet again)

1. What are the only two cities to have undergone attack by both ballistic and cruise missiles?
2. How did the battle of Khalkhin Gol alter the course of World War II?
3. What piece of personal equipment was considered as important as a parachute by American fliers in the Pacific?
4. What was *gedunk*?
5. What was Unit 731?

Pedagogy

Anybody who has watched *Star Trek* is familiar with the concept of antimatter. But, what is it really? How can it be produced? And how can it be used?

Back in the early years of this century, physicists were puzzled at what seemed to be a fundamental asymmetry in the universe. Why was the carrier of positive electric charge, the proton, so much more massive than the carrier of negative electric charge, the electron. (Protons are about 1840 times more massive than electrons.) Then it was discovered that each of these particles had a counterpart with the same mass but exactly opposite electric charge. As these new particles were explored further, it was discovered that they were opposite to normal matter in many ways: magnetic moment, baryon number, and lepton number principle among them. The counterpart to the electron is called the positron, while the counterpart to the proton is called the antiproton. The neutron also has an antiparticle, called the antineutron, but since it has no electric charge, the two are very difficult to tell apart.

One of the most outstanding properties of antimatter is that if it comes into contact with its normal matter counterpart, they mutually annihilate, releasing the total mass of both particles as energy. This makes antimatter by far the most efficient way of converting mass to energy: 100% efficiency. The next most efficient is fusion at only 4%. One milligram of matter annihilated with one milligram of antimatter yields as much energy as 20 tons of the most energetic chemical explosive known: hydrogen and oxygen.

With such enormous efficiency, antimatter obviously has tremendous potential as an energy source. There are two difficulties with this, however. The first is how to obtain the antimatter. The second is how to store it when you do get some. Both of these problems are well within our current technical capabilities to solve.

Antimatter is being produced to day in small quantities at several particle accelerators around the world. Before I can discuss the technique, I will have to digress a bit into terminology. In particle physics, energies are commonly given in electron Volts, or eV for short. If a metal plate were to have an electric potential of exactly one Volt (about one third less than a common flashlight battery), it would attract electrons. An electron which was attracted to such a plate would have an energy of one electron Volt just before it hit. The average TV set produces about 20,000 eV (or 20 keV) internal to

the picture tube. If an electron were converted to energy, it would produce about half a million electron Volts, or 0.5 MeV. Many of today's particle accelerators can generate energies in the GeV range (1000 MeV, or one billion electron Volts), which is enough to accelerate protons to a significant fraction of the speed of light.

At the US antimatter factory at Fermilab, protons are accelerated to energies of 120 GeV. Since the energy in a proton at rest is a little less than one GeV, this is enough to produce 60 proton-antiproton pairs. These protons are then slammed into a target made of thick tungsten or copper wire. When a proton collides with a heavy nucleus, its kinetic energy is converted into gamma rays, and many types of particle-antiparticle pairs, some of which are proton-antiproton pairs. The efficiency is about 5%, in other words, 5 antiprotons are produced for every 100 protons accelerated.

With the wide variety of particles that are produced in the collision, how are the antiprotons weeded out? Well, just past the target is a magnetic lens, specially tuned to focus particles with the mass of a proton and a negative electric charge. Some of the antiprotons miss the lens entirely, but those which pass through are then sent to a collector which also steps down the kinetic energy of the antiprotons. This is a magnetic ring which contains special controls to drain energy out of the faster antiprotons to get them all moving about the same speed. So far, the highest capture efficiency is about 1%. So, for every antiproton captured, 2000 protons have to be accelerated. The typical collector ring can hold about a trillion antiprotons -- about two trillionths of a gram.

When the collector gets full enough, the antiprotons are sent to an antiproton decelerator, which is essentially an accelerator run in reverse, and from that to a low energy antiproton accumulator -- another magnetic ring. Overall, Fermilab has an overall collection efficiency of 0.04%, which combined with the 5% efficiency of the target, and the overall inefficiency of the initial accelerator, the process has an overall energy efficiency of one part in 60 million, which means that currently, antimatter costs about ten trillion dollars per milligram. Fortunately, there are ways to reduce this cost.

Next time, I will discuss storage of antimatter, as well as some of its practical applications.

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Caleb Cousins 96 Cedar St. #4 Bangor, ME 04401 (207) 941-8568	Ray Grib "Ray-Bid Basset" 2424 Penton Ct. Deltona, FL 32725 (904) 789-7867	Michael Lowrey 6503 Four Winds Dr. Apt. D Charlotte, NC 28212-3749	Bob Robles "Howler" 67 Tara Rd. Orinda, CA 94563 76350.2203@compuserve.com (510) 254-6354	Jason Wilke "Rock-it Man" 2042 Dalon Ave. Deltona, FL 32725 wilke@iag.net (904) 789-7764
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Standbys

Anybody who gets onto my standby list automatically receives one free issue of *S.O.B.* In addition, if you actually submit standby orders, you get another free issue. So, lets get those people standing by. The current standby list is:

Machiavelli (gunboat and regular): Steve Koehler, Bill Scharf, Bob Robles, Jason Wilke, Kevin Kinsel, Mike Scott, Dave Anderson, Ward Narhi **Dune:** Steve Koehler, Paul Bolduc, Debbie Osborne, Kevin Wilson, Ward Narhi **New World:** Dan Eisenhut, Kevin Kinsel **Merchant of Venus:** Paul Bolduc, Dan Eisenhut, Debbie Osborne, Carrie Lewis, Bob Robles **Die Macher:** None **Outpost:** Dave Anderson, Dan Eisenhut, Michael Lowrey **History of the World:** Andy Lewis, Dan Eisenhut, Paul Bolduc, Kevin Wilson, Chris Geggus, Dave Anderson **Stellar Conquest:** Paul Bolduc **Gunslinger:** Paul Bolduc, Mike Scott **2038:** None

Standby Calls

None this issue!