

# MALIF

NUMBER FOURTEEN \* A SEVAGRAM PUBLICATION



"Me? I'm attached to the Seldon Foundation."



# WITH KEEN BLUE EYES AND A CRYOCHOCYCLE

## A VISIT TO WINTER

The phone rang. "It's seven-thirty; the temperature is seventeen degrees." I muttered thanks and got out of bed. My throat was dried out. I went to the bathroom for a glass of water; a spark jumped as I brushed the door-frame. I gagged on the mineral taste of the water. My nose felt as though it were full of sharp gravel, and I rubbed a wet finger inside each nostril. By the time I had dressed, I could blow out the softened mucus; there were flecks of blood in it. "So this is Denver," I growled.

Or might have, anyway; what I probably said that morning was, "My God, do the AAAS have to have morning sessions?" In this case, it was Section C (chemistry) of the American Association for the Advancement of Science, Concurrent Symposium: Extraterrestrial Biochemistry and Biology, Part I. Part II was to be held that afternoon. The date was Wednesday, December 27th. This morning session was one of the chief reasons we had for attending.

Fortunately we didn't have to go out into that winter they were having in Denver; this symposium was in the same hotel we were staying at.

Philip Abelson of the Carnegie Institution of Washington spoke on "Long-term Viability of Organisms," like, how long can a bacterium survive inside a meteor? My notes seem to say that at 20° Centigrade, 1/e of the original amount of alanine (an amino acid) would remain intact\* but the same proportion would be found after one second at 450° C. \*Whoops -- would remain intact after 3x10<sup>9</sup> years. Arginine, however, is less \* stable, and at 20° would all have broken down after a mere 25 million years. Thus, if your bacterium or what-have-you depended on arginine, it would be dead by then. Other aminos last longer or shorter times. I merely pick this out as a sample of the material covered.

Sidney Fox of Florida State University spoke on "Borders of Biochemical Evolution." He discussed actual amino acids synthesized by the famous ammonia-soup-and-lightning method, as well as artificial aminos not found in nature (seleno-cysteine, for instance). Unfortunately, he said, these lightning-soup amino acids don't seem eager to join together into proteins, and in fact are found in proportions very unlike those which appear to be necessary. He quoted George Beadle in the following interlineation:

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"A theory must be reasonable -- a fact, never." -- G. Beadle

Charles Phillips of the Army Chemical Corps presided over this, and in introducing the next speaker he emphasized that he hoped "Life Spectra" wouldn't report on a single experimental fact. Poul and I grinned at each other: we know why.

This next speaker was the one we wanted to meet: no world-famous scientist, not even a PhD to his name, but a general science teacher with his bachelor's in astronomy and his master's in education. . . Harry Clement Stubbs. And I'm not going to try to summarize his paper, since I'm publishing it in VORPAL GLASS (25¢ a copy -- plug). It dealt with speculation regarding extraterrestrial biology as found in science fiction.

The fourth paper of the morning was by two men from the Illinois Institute of Technology, Ehrlich and Hawrylewicz, and I don't recall which of them actually presented it. They reported attempts to grow earthly lichens and bacilli under simulated Martian conditions.

At the end of the session, I scooted for the door to intercept Hal Clement. "My husband wants to meet you --" I began. "I have to hurry upstairs for a press conference," he said, "But I want to meet both of you. Come on up." He gave me the room number.

Poul was talking to somebody or other, and when he finished we went upstairs, wondering how Clement had known who we were. Why should he expect us to be there? And he couldn't even have read our badges at that distance . . .

We went to lunch after the press business, and he explained that there was a note on the bulletin board addressed to him and us. That puzzled us even more . . . But once he knew we were here, it was easy, because he'd seen pictures of us at conventions.

Hubertus Strughold was the author of the first paper in the afternoon session, but it was presented by someone else. This dealt with the possibilities of Martian ecology. He emphasized the poverty of Mars but said that we might merely have been unable to imagine as yet forms which could actually flourish under these conditions; and we might even develop such forms for the benefit of our Martian stations.

Carl Sagan of Cal-Berkeley's Space Science Laboratory (who, from his remarks after Clement's speech, is a fan) discussed the Arrhenius theory of panspermy. He said that panspermy was invoked to get around the question of the creation of life at the time when the spontaneous generation notions that had maggots created from rotten meat had finally been got rid of. He quoted Kelvin: "Dead matter cannot become living without contact with living matter. This seems as sure to me as the law of gravitation." Of course, Sagan added, gravitation isn't what Kelvin thought it was, either. Though we don't need the panspermy theory now, Sagan was concerned with its feasibility. The trouble seems to be that if there's enough light pressure to push the bugs out from their home system, they're all killed by the UV. Similar difficulties can be found all over the place. The possibility of panspermy seems very poor.

The next item was a movie on safety techniques; it had got mislaid, and while it was being brought, we went to look at the exhibits instead.

We never did get back to the symposium, nor even get to the Chemists' Mixer which I had thought might be fun. By the time we got out of the exhibit area it was too late to do anything but dress for dinner.

Yes, I said dress for dinner . . . did I say yet where we were staying? The Hilton. So okay, you wear a smart little suit and it's okay for lectures and Fancy Expensive places (like the Hilton Coffee Shop) both. Fine, I don't have anything but a Palm Beach suit that (a) isn't winter weight, obviously; (b) wrinkles and creases if it gets a hard look -- this I should live in for four days? (c) I don't know where it is, as I haven't worn it for six years. Fine. What I did was to switch between an uncrushable gray wool knife-pleated skirt with assorted blouses for day wear, and an uncrushable black wool jersey dress with choice of white-and-silver or green-and-gold accessories, hats, jewelry, etc., for dinner and for evening sessions.

We ate at one of the Fancy Expensive dining rooms in the Hilton, actually probably the least so besides the Coffee Shop, and had an excellent meal. Then it was time for the Helen B. Warner Lecture in Astronomy. This honors the best contribution to astronomy, or like that, by a man under 35. Correct me if I'm wrong, AYoung. This year's Warner Lecture was by Joseph W. Chamberlain of Yerkes Observatory, on the upper atmospheres of the planets. He spoke chiefly on Earth and Mars, in great detail with lots of equations. I turned my notebook over to Poul, since most of it was too technical for me to follow. I did get the general idea, though, and afterward Poul and Hal (we'd met him on the way in) and I went up to ask a question or so. Mine was (gotta get in my egobook) in regard to an unexplained high temperature at very high levels of Earth's atmosphere. Chamberlain had mentioned that even the effect of the noise of ocean waves had been suggested to explain this, but nothing seemed to work. I asked him if enough was known about micrometeorites to tell whether friction from them could do it. He said, no, that didn't seem to do it either, but it might be partly responsible. We got to talking with Chamberlain, and since everybody disappeared rather quickly (even Hal; he said he needed sleep or something) we bought him some drinks. He seemed to have been snowed by us, and asked if we were astronomers ourselves. Like you, us science fiction people know how to make the right noises to scientists.

We'd had to go to the Shirley Savoy for that lecture, and next morning (Thursday) we had to go out again, to the Petroleum Club. This was for Geochemical Evolution. There were papers by Burbidge (he and his wife have had two articles in Scientific American in the past year), Harold Urey (who grotched at the subtitle "The First Five Billion Years" -- he'd worked hard for the date of 4.5 billion), Philip Abelson, and Albert Engel. They did a good bit of polite sniping at each other. Unfortunately, the blackboard and slide-projection equipment was badly arranged and caused great difficulty.

Great Phthalo, all that solid text and no subtitles to break it up into mouthfuls. I blinch. Quick, think up some subtitles . . .

#### EAST OF GLENN L. MARTIN

. . . there were rockets at the Cape, / Westward stood the red Sierra scarp. Now that I've made it impossible to rhyme I'll leave it to someone else.

We lunched with Hal again, not in the "Coffee Shop" but as before in the drugstore, and then separated. They heard the other half of the "Moving Frontiers of Science" symposium, of which we all missed the first half on Tuesday morning. I went on a guided tour of the Martin-Denver plant and saw the Titan missile production line. We were to have seen the test stands where they have static firings, but they'd tested the first Titan II that morning and no one was allowed in the area without gas masks. There were two busloads of us, and there just weren't enough masks.

In intervals between serious matters we'd been trying to get in touch with the man who'd left that note for us on the bulletin board. It turned out he knew the Heinleins, and that's how he knew we were in Denver. We'd left messages on the board and at his booth (he was an exhibitor) saying, yes, we'd love to have dinner with you but Thursday is the only possible date. We'd be in our room from 6:30. So, around 6, we went up and started dressing . . . waited . . . waited until after 7, decided he still hadn't got the message, and finally instead of having our dinner bought for us by Whosit we called Hal and bought dinner for him. We talked about various stfnal life forms, written and not yet written; Hal mentioned a story he's in the middle of writing, about a planet that never had a sun. Internal radioactivity keeps it warm, but what do you substitute for photosynthesis? Later that evening, after he'd gone off to appear on a radio program, Poul and I talked about the problem and I dreamed up a solution; telling Poul about it, I had to keep patching it up, because he kept kicking holes in it.

#### THE GRAY FLANNEL SPACESUIT

Friday morning there was a choice between Manned Lunar Flight I and Geochemical Evolution II. Hal, who would be leaving in mid-afternoon, chose the latter; but we had another 24 hours in Denver and wanted to attend the whole 3-part lunar symposium. We didn't see him in the morning and assumed we'd not be seeing him again, since the lunar deal was over in the Cosmopolitan and the geochemical thing at the Petroleum Club. We were both at the Hilton, but Poul and I had to go out to another drug store for breakfast -- the one in the Hilton building wasn't open yet. As it turned out, we had to go back at lunch time to take care of plane reservations in the Hilton building, and had lunch in the drugstore there --- and, as I'd hoped, Hal came in just after we'd sat down. I gave him the

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adding that I was sorry I hadn't been able to hear him myself. He explained the matter, and we talked to him for a while; I asked him about some of the weird multiple systems R. S. Richardson used to write articles about. After a while he asked us if we'd made a special study of astronomy, because although from our questions we weren't astronomers ourselves, we seemed to know such a lot about it. So we told him . . . and about ten minutes later he suddenly did a double-take: he's a Poul Anderson fan.

Here I step out of chronological order to add that when we got home I looked up the article I knew I'd read of his, and found it in a recent issue of Science: it was last year's Helen B. Warner lecture! Not only that, but the latest Science mentioned that he'd won a \$1000 prize for the work he'd described Thursday.

We started talking Cold War politics with Arp, and then instead of hearing about "The Second Engineering Revolution" we went with Arp to a discussion of Science And Human Survival. This was where I didn't quite meet Margaret Mead. We had to leave early (eleven-thirty) since we were very short of sleep, had to pack, and had to catch a train at nine next morning.

#### SOME LOOSE ENDS

I misremembered: the President's Reception was Thursday, not Friday; we went there after Hal left for the radio station. Friday evening we happened to meet Arp outside one of the meeting rooms just before a lecture we wanted to hear but skipped.

The Exposition of Science and Industry was fabulous. Do you ever read the ads in Scientific American or (better yet) Science? This was ads in three dimensions. For instance, a TV-microscope hookup which at one point was showing paramecia swimming along on a 21" screen. . . an induction heater that runs on house current and can reduce a used razor blade to a glob of white-hot steel in five seconds. . . a scale model of the Martin Aries, a five-man orbital laboratory which could be put up by 1967 . . . the Decker Caudal Plethysmograph System . . . a subminiature neutron generator . . . and, yes, I'm coming to it now: the Cryhicycle. (Which I misspelled in the heading.) This is (to quote the Directory of Exhibitors in the official program -- and did you ever go to a convention with a 280-page program?): "A cryogenically fueled, fully integrated space power generation and thermal control system. Powered by cryogenic hydrogen and oxygen, this system is unique in that normally wasted heat, from energy conversion inefficiencies and metabolic heat from the crew of the space vehicle, is recovered by the coolant loop. . . " It goes on, but that should give you the idea. They had a model of it ten feet high. I should give the company its egoboo: Sundstrand Aviation-Denver. You know those full-page, full-color ads in SciAm, with an astronomical painting featuring some kind of space vehicle? That's what this was.

## EXERCISE ON A THEME OF WONDER

When I wrote this up in SAPS, I said that it happened when I was fifteen years old; actually, now that I count more carefully, I realize that I was 15 eight months later that year.

I was fourteen years and four months old in February of 1947. My father was sitting at the kitchen table leafing through the new Saturday Evening Post, and remarked with pleasure and surprise that there was a Heinlein story in it. That was an odd name, I thought; and when he was through with the magazine I looked to see if the story was interesting. It had a beautiful illustration and I thought the story was wonderful.

A little less than fifteen years later I saw that illustration again -- the original painting for "The Green Hills of Earth" -- in the Heinleins' living room.

Yet still the lacy Spires of Truth sing Beauty's madrigal

And she herself will ever dwell along the Grand Canal.

I make no claims regarding the quality of those lines as poetry; I can't say how good the picture is as art, or even how good the story is. I can't because I have no better judgement now than I had when I was fourteen years old: when I think of "Green Hills," I'm fourteen again, with my sense of wonder intact.

Back to earth . . . The first thing that happened in Denver, while the bellboy was still showing us how to work the TV set, was that the phone rang. It was Bob Heinlein calling from Colorado Springs. They didn't want to come to Denver because the weather is generally worse; but he'd looked up the schedules and recommended that we go down by train, then return to Denver by plane; but wouldn't we stay a day longer and celebrate New Year's Eve with them? We couldn't change our reservation back to San Francisco, dammit; but it was easy enough to get on the flight back to Denver and make connections with our previous reservation.

The train left at 9:35, in spite of the schedule that said 9:00, and reached Colorado Springs 35 minutes late. 35 minutes shot to hell. Bob and Ginny were waiting at the station, and there was hot coffee waiting in the kitchen after I'd gotten over the initial effect of the painting of Rhysling. We were introduced to the cats, shown how to find the hidden trash-containers and sliding doors, fed, offered choice of liquor, and in general most royally entertained. Lack of detail here is because of lack of space, and not due to the effects of drinking at least a quart of rum and not getting any sleep at all. I remember it all: the orchid (the third one I'd ever had, and which I put in the refrigerator afterward so I could wear it home, but forgot until I was on the plane), the cocktail party at the Browns', dinner at the Penrose Room, the party afterward at the Heinleins'; the admiral who pawed me in a most gentlemanly way; the opera singer who sang the "Habanera," complained that she couldn't sing and drink and play the piano all at once, so we sang "Auld Lang Syne" with her while she played; all twelve of us going down to the fallout shelter (he

finally talked himself into building one), where I remarked that he was the man who'd invented them -- D. D. Harriman had the first one, and Bob answered that he'd invented fallout too in "Solution Unsatisfactory."

I remember that it snowed a little, that there's a George Barr satyr over the bathtub, that Ginny offered to lend me anything I wanted from a bobby-pin on up, that Poul hadn't any cuff links and borrowed a pair with Kon-Tiki faces, that there is a spring-closed panel over the kitchen counter through which bottles go to the right and paper to the left, that Bob showed everybody a stereo slide of me in the Rotsler Girl costume (the only picture of it I've seen yet). I remember that there was an original Bonestell in the living-room, too, but I didn't look at it much. I kept looking back at the picture of Rhysling.

We left Colorado Springs at twilight Sunday, changed planes in Denver, picked Astrid up in San Francisco, and went to the New Year's party at Ray Nelson's, arriving a few minutes after midnight. I told everybody what a gorgeous time we'd been having in Colorado, and (being just tired, pill-pepped, and excited enough) got so euphoric that one suspicious type took a drag on my cigarette to see what I was smoking. The pill, if you're wondering, was Dexamil and I'd had it at ten in the morning. I wasn't hopped, just happy. We got home around 3:30 and I'd been forty-five hours without sleep, but I'd had a quart of rum and a half-pint of whiskey; they cancelled out, and with nine hours' sleep I was awake and had no hangover.

The Denver part of the trip was wonderful, of course. It would have been eminently worth it if that was all we'd gone for. But the side trip to the Heinleins' was even better.

I'll never forget what it was like to go through the door of their living-room and see Rhysling standing above the Grand Canal. Dorothy opening the door after the cyclone and seeing the Land of Oz . . . H. G. Wells' story of the Door in the Wall . . . more than that. The Door Into Summer.

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This is the part where I explain to newcomers that my name is Karen Anderson and like that. For the benefit of indexers or conceivably even myself at some future date, this issue of Alif is #14 and it is for the 98th EAPA mailing. It is therefore the issue of February, 1962, and celebrates the 15th anniversary of "The Green Hills of Earth."

The Alif in the May mailing will celebrate my tenth year of actifandom, and the August mailing will be about three weeks early for the tenth anniversary of meeting Poul at the Chicon II. If the last SAPS deadline had been in December as it used to be, it would have been my eighth wedding anniversary. This has been a Sevagram Publication.