Marine Biological Laboratory,
Woods Hole, Mass.
29th June 1955.

Dr J. Lederberg,
Department of Genetics,
University of Wisconsin,
Madison, Wis.

Dear Josh,

Yes, the Sussmen did look us up, and we were certainly delighted to meet them at long last, having admired their work from afar for so long. We talked a blue streak, and I got a number of good ideas to try out if I ever get a chance to work with flagella and mating again. I hope I shall: application to the P.H. people went in yesterday.

You are undoubtedly familiar with Kallio's work on desmids: Bull. Torrey Botan. Club 80:247-63 (1953) is a fairly recent paper of his. I saw a number of his strains here last week, when Dick Starr was demonstrating them to the class: very pretty, too. Apart from that, I can't think of any alga that fits your requirements. Of course, in multicellular forms the apical cell nearly always divides unequally: Sphacelaria or Chara provide simple examples of this. "Cap-cells" in Oedogonium (F.E. Fritsch, "Structure & Reproduction of the Algae", Vol. I, p.300) are a less specialized example of the same sort of thing. I think Caspari has been misling you somewhat on the subject of Scenedesmus: the cells divide essentially as in Chlorella, but stay in 4 or 8-celled colonies until the next division.

As for the diatoms, you might look at Weidling, S. (1948), Bot. Notiser 3:322-54, "Beitraege zur Kenntnis der vegetativen Vermehrung der Diatomeen", though I don't think it'll help you much. Some diatoms decrease steadily in size, owing to the lid-and-dish effect with which you are doubtless familiar: but I feel this is just a mechanical effect of the inelasticity of the frustule, and my co-worker is of the opinion that, within the wall, cell division is pretty equal. Almost all of her 50-odd strains have shrunk since they were isolated. Navicula pelliculosa appears to be an exception, since it is girt with only the slightest of girdles: the halves of the Petri dish don't overlap, so it keeps 8μ x 3μ for years and years. Hence the advantage of working with this species.

Maurice told us of your wonderful success in getting bacteria to mate sub oleo - in flagrante delicto. Congratulations! Maybe that's a good bug to work with, too.

Tales reach us that F.M. may be going to Germany, or coming here for six months, or going to Florida. Hm. Dick Starr and I were looking forward to taking part in a symposium on the genetics of algae at East Lansing: but when we got a copy of the projected programme and saw that one of the other invited speakers was someone who might be calculated to reduce the high level of the symposium in public esteem, we regretfully had to withdraw our names and titles. We cabled Ruth Sager, for information: I wonder if she took similar action.

The job situation is as nebulous as ever. Texas is off, definitely: they didn't manage to raise the funds from the State legislature. Columbia is off, too: Ewing didn't get the Rockefeller grant. I've heard nothing from Brandeis for months. Now we've got the wild idea that we may be able to raise funds and stay here for a while: it would certainly be wonderful.

We've been just revelling in the atmosphere of academic biology again, after having been away from it so long. I don't think there's any point in telling you whom we've met already - people drop into this lab almost hourly.

Joyce has gone home to prepare nutrient media for the Lewins, but she would have sent her love.

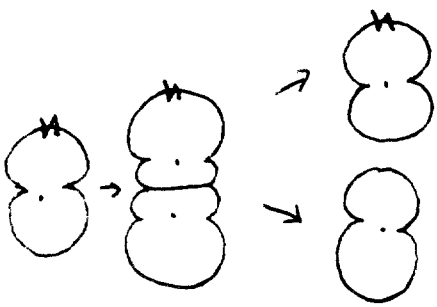
All the best.

Yours,

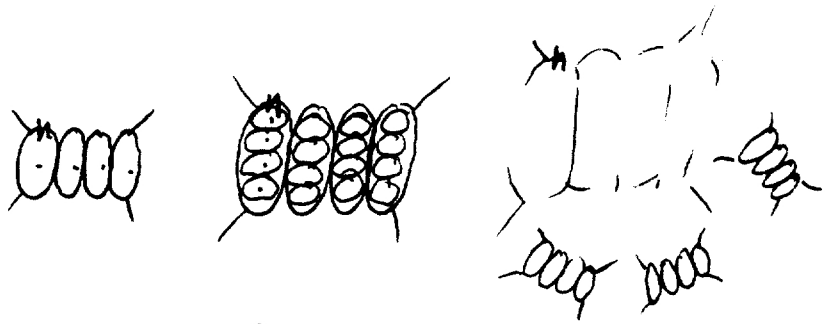
Ralph

Ralph A. Lewin.

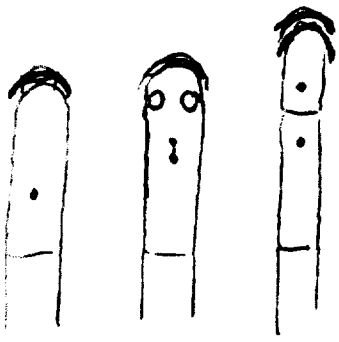
Recorder session with the Grobsteins tomorrow evening.



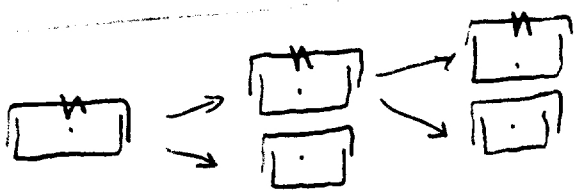
DESMID



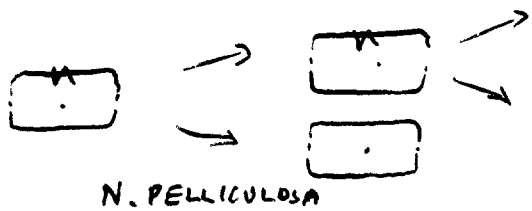
SCENEDESMUS



OEDOGONIUM



MOST DIATOMS



N. PELLICULOSA