draft, the one having the maximum draft further aft will develop more force than the other, provided each sail is operating at its ideal angle of attack. Obviously such factors interact with the hull performance for an optimal result. The properties of fabrics were briefly discussed, particularly nonreversible stretch and the minimization of this property by gluing seams prior to stitching. It was pointed out that there is no tension along the leech of a sail and a comparatively large tension just forward of the leech. This is the cause of the frequently encountered "cupped leech." Such cupping can be minimized by the use of a hard finish sail cloth and untabled leeches.

The nature of the slot between the jib and the mainsail was discussed, and notwithstanding the fact that measurement rules often influenced optimization of this, Milgram pointed to the highly effective design for the 5.5-meters where, as a matter of fact, the rig was more efficient without an actual overlap between the jib and mainsail. In this connection, Milgram pleaded for a revision of class measurement rules which had long restricted the exciting development of cruising class rigs. Small, high-aspect ratio mainsails with a short, readily controllable boom were now shown to be highly efficient and effective in the One-Ton Class. Furthermore, realistic measurement of the head sail area could lead to sails of more modest size compared to the large Genoa jibs now in vogue in many of the cruising classes, with very little decrease in performance.

In the discussion, water-flow techniques for studying sail performance were mentioned, particularly with respect to the better visualization techniques that are possible in water flow. However, this advantage was countered by exciting films of turbulence in the 12-meter sails, obtained through the cooperation of the late Freidrich Ringleb (Naval Air Engineering Center, Philadelphia) where wind tunnel tests of 12-meter sails clearly showed many interesting qualitative properties of air flow around the sails.

It was apparent from this meeting that the satisfactory correlation of the full-scale tests on the 5.5-meter model at David Taylor Model Basin with the 1:6 size model now puts the model testing program on a much firmer footing. One can now look forward to a great deal more quantitation of these data. This result, coupled with a better understanding of the properties of keels of low projected area and a realization of the steering problem of such short-keel designs involving separated rudders with or without appropriate skegs, seems now to place the keel boat in a most interesting position. One can expect exciting developments in the America's Cup class (12 meters) and the Olympic class (5.5 meters) and in the new three-man, keel boat of the International Yacht Racing Union, to say nothing of the large number of ocean racing cruising boats of advanced design. This progress, together with the possibilities of studying the performance of models under simulated rough water conditions, will bring into the region of quantitative study some problems whose solutions have been completely empirical or largely unknown to date.

Quantitation of sail performance from wind tunnel tests of scale models or from tests of full-size craft is springing up in several places. These results, when accurately correlated with programs for actually calculating the pressures and lifts of sails of known design, will further provide a springboard of quantitative data for improvement in an area where empiricism has reigned supreme. It seems now that science and sailing sport may go hand in hand to give one of nature's most exhilarating physical experiences an intellectual aspect as well.

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Forthcoming Events

May

1–2. **Adhesion** (Cold Welding) **of Materials in Space Environments**, natl. symp., American Soc. for Testing and Materials, Toronto, Ont., Canada. (The Society, 1916 Race St., Philadelphia, Pa. 19103)

1–2. Association for **Research in Ophthalmology**, Clearwater Beach, Fla. (H. E. Kaufman, Dept. of Ophthalmology, Univ. of Florida College of Medicine, Gainesville 32601)

1–2. Colloquium on the **Pupil**, Univ. of Pennsylvania, Philadelphia. (A. Laties, Old Medical School Bldg., Univ. of Pennsylvania School of Medicine, Philadelphia)

1–2. Rocky Mountain **Bioengineering** Symp., Univ. of Colorado Medical Center, Denver. (RMBS, P.O. Box 59, USAF Academy, Colo. 80840)

1–2. 1967 **Rural Electrification** Conf., Cedar Rapids, Iowa. Office of Technical Activities Board, (Inst. of Electrical and Electronics Engineers, 345 E. 47 St., New York 10017)

1–3. American **Astronautical** Soc., 13th annual mtg., Dallas, Tex. (R. Gilmer, Varo, Inc., 800 Garland Ave., Garland, Tex.)

1–3. **Geology and Technology of Gulf Coast Salt**, symp., Louisiana State Univ., Baton Rouge. (D. H. Kupfer, Dept. of Geology, Louisiana State Univ., Baton Rouge 70803)

1–3. **Markov Processes and Potential Theory**, spring symp., Madison, Wis. (J. Chover, Mathematics Research Center, Univ. of Wisconsin, Madison 53706)

1–4. American Soc. of **Lubrication Engineers**, 22nd annual, Toronto, Ont., Canada. (The Society, 838 Busse Hwy., Park Ridge, Ill. 60068)

1–4. **Pulp Bleaching** Conf., 4th intern., Toronto, Ont., Canada. (Canadian Pulp & Paper Assoc., Technical Section, 2280 Sun Life Bldg., Montreal 2, P.Q.)

1–5. American **Industrial Hygiene** Assoc., conf., Chicago, Ill. (The Association, 14125 Prevost, Detroit, Mich. 48227)

2–4. Purdue **Industrial Waste** Conf., Lafayette, Ind. (D. E. Bloodgood, Purdue Univ. of School of Civil Engineering, Lafayette 47907)

2–4. **Research Reactor Utilization** and **Reactor Mathematics**, intern. conf., Mexico, D. F. (O. J. Du Temple, American Nuclear Soc., 244 E. Ogden Ave., Hinsdale, Ill. 60521)

2–5. Biological Effects of **Pesticides**, conf. New York Acad. of Sciences, New York, N.Y. (Executive Director, The Academy, 2 E. 63 St., New York 10021)

2–5. **Pulp and Paper** Industry Tech. Conf., Houston, Tex. (W. S. Hines, Westinghouse Electric Corp., Box 4808, Atlanta, Ga. 30302)

2–5. Use of **Subhuman Primates in Drug Evaulation**, symp., Southwest Foundation for Research and Education, San Antonio, Tex. (L. R. Smith, Jr., The Foundation, P.O. Box 2296, San Antonio 78206)

3. **Current Concepts in Etiology** and **Diagnosis of Cancer**, American Cancer Soc., 1967 scientific session, Dallas, Tex. (Vice President for Professional Education, The Society, 219 E. 42 St., New York 10017)

3–5. **Electronic Components** Conf., Washington, D.C. (Office of Technical Activities Board, IEEE, 345 E. 47 St., New York 10017)

3–5. **Human Factors in Electronics**, 8th annual symp., Institute of Electrical and Electronic Engineers, Palo Alto, Calif. (R. J. Randle, Biotechnology Div., Ames Research Center, Moffett Field, Calif.)

3–5. **Pulp** and **Paper Instrumentation symp.**, 8th intern., Instrument Soc. of America., St. Paul Minn. (S. Slenning, Honeywell, Inc., 415 E. 27 St., Minneapolis, Minn. 55408)

5–6. **Clinical Colloquia** of Vienna, Vienna, Austria. (Mrs. M. Peutlschmid, Vienna Acad. of Medicine, Alser Strasse 4, A-1090 Vienna)

5–7. Society for **Applied Anthropology**, 26th annual mtg., Washington D.C. (M. Pearsall, Lafferty Hall, Univ. of Kentucky, Lexington 40506)

3–6. **Rare Earth Research** Conf., 6th, Gatlinburg, Tenn. (W. C. Koehler, Solid State Div., Oak Ridge Natl. Lab., Oak Ridge, Tenn. 37831)

3–7. Fifteenth Colloquium, **Protides** of **Biological Fluids**, Brugge, Belgium. (The Colloquium, P.O. Box 71, Brugge 1)

4–5. **Fiber** Soc., Asheville, N.C. (The Society, Textile Research Inst., P.O. Box 625, Princeton, N.J.)

4–5. **Salt-Water Encroachment** of **Aquifers**, symp., Louisiana State Univ., Baton Rouge. (E. J. Dantin, Louisiana Water Resources Research Inst., Louisiana State Univ., Baton Rouge 70803)

4–6. Society for **American Archaeology**, Ann Arbor, Mich. (E. M. Davis, Dept. of Anthropology, Univ. of Texas, Austin 78712)

4–7. Association of **Clinical Scientists**, Orlando, Fla. (R. P. MacFate, 300 N. State St., Apartment 5322, Chicago, Ill. 60610)

5–7. American Acad. of **Psychoanalysis**, Detroit, Mich. (M. Carroll, The Academy, 125 E. 65 St., New York 10021)

5–7. Society of **Biological Psychiatry**, scientific conv., Detroit, Mich. (The Society, 2010 Wilshire Blvd., Los Angeles, Calif. 90057)

6. Central States **Entomological** Soc., 42nd annual, Univ. of Missouri, Columbia. (R. B. Mills, Dept. of Entomology, Kansas State Univ., Manhattan 66504)

6–8. World **Dredging** Conf., New York, N.Y. (M. Richardson, P.O. Box 88, Palos Verdes Estates, Calif. 90274)

7–11. Third Pan American **Cancer Cytology** Congr., New York, N.Y. (J. E. Ayre, The Congress, 115 E. 69 St., New York 10021)

7–12. **Electrochemical Soc. Sets**, spring mtg., Dallas, Tex. (The Society, 30 E. 42 St., New York 10017)

7–12. **Petroleum** Symp., Banff, Alta., Canada. (Director, Dept. of Extension, Univ. of Alberta, Edmonton, Alta.)

7–13. World Congress of **Motoring Medicine**, Vienna, Austria. (The Congress, Vienna Acad. of Medicine, Alser Strasse 4, A-1090 Vienna)

8–9. "**Power-Play** for **Control of Education**," Education Commission of the States, Denver, Colo. (The Commission, Suite 822, Lincoln Tower Bldg., 1860 Lincoln St., Denver 80203)

8–10. American **Oil Chemists'** Soc., 58th annual, New Orleans, La. (The Society, 35 E. Wacker Dr., Chicago, Ill. 60600)

8–10. **Static Electrification**, 2nd conf., Inst. of Physics and Physical Soc., London, England. (Meetings Officer, The Society, 47 Belgrave Sq., London, S.W.1)

8–10. International Conf. of **Mechanics of Composite Materials**, Philadelphia, Pa. (T. Ryan, Space Sciences Lab., General Electric Co., P.O. Box 8555, Philadelphia 19101)

8–10. Symposium on **Origin and Distribution of the Elements**, Paris, France. (E. Ingerson, Dept. of Geology, Univ. of Texas, Austin 78712)