

by bad weather he completed another "hop" of 3,197 miles to Honolulu, and a few days later completed the 2,400 miles on to Oakland, California.

Mr. C. T. P. Ulm—one-time partner with Sir Charles—also attempted a Pacific flight—but with tragic result. He, accompanied by Mr. G. M. Littlejohn and Mr. J. L. Skillington, set out, on December 3, from Oakland, California, in an Airspeed "Envoy" (two Armstrong Siddeley "Lynx") with the object of surveying the route from Canada to Australia. The following day they sent out messages saying they were coming down off Honolulu owing to lack of petrol. Since then, in spite of exhaustive searching, no trace of them has been found. Like that of Bert Hinkler, this tragedy was a severe blow to British aviation.

Ulm had previously accomplished other noteworthy flights during 1934—in February he carried the first official mail from New Zealand to Sydney, Australia, in his Avro X, *Faith in Australia*, and again in April he made a similar flight from Sydney to New Zealand and back. Sir Charles Kingsford-Smith also carried out a flight across the Tasman Sea—his third—in the famous Fokker monoplane *Southern Cross*. This flight was accomplished on January 13, with Capt. Taylor and Mr. Stannage. The Tasman Sea was again crossed in November, when Messrs. J. D. Hewett and C. E. Kay—competitors in the England-Australia air race—flew in their D.H. "Dragon" from Sydney to Palmerston, New Zealand.

There were many minor noteworthy flights during 1934, but space will not allow more than the following brief résumé of some of them.

*February*.—MM. Robert Germain, Descamps, and P. Laveaux made the first flight from Algiers, over mountains and desert, to Lake Chad (West Africa) in a D.H. "Dragon."

*March*.—Senhor Carlos Bleck, a Portuguese pilot, flew from Lisbon to Pangim (Portuguese India), 6,606 miles, in a D. H. "Moth" ("Gipsy Major") in a flying time of 62½ hours.

M. and Mde. Guy Hansez flew in a D. H. "Fox Moth" ("Gipsy Major") from Antwerp to Leopoldville (Belgian Congo) via Toulouse, Oran, and Douala, in five days.

*April*.—The Duchess of Bedford, accompanied by her personal pilot, Capt. C. R. Preston, started from Lympne in her D. H. "Puss Moth" on a flight to Senegal and back via the West Coast of Africa.

*June*.—A Danish Hawker "Dantorp," piloted by Capt. Grandjean and accompanied by Lt. Muentner and G. Rasmussen, flew from Copenhagen to Faroë Is., 1,000 miles, in nine hours.

*July*.—Lt. G. Tyson, on July 25, the anniversary of Blériot's cross-Channel flight of 1909, flew upside down from Dover to Calais in a D. H. "Tiger Moth."

*August*.—Mr. E. W. Percival flew a Percival "Gull" from Gravesend to Copenhagen, 640 miles, in 4 hours.

*September*.—Sir Charles Kingsford-Smith and Capt. Taylor flew non-stop in the Lockheed "Altair" from Melbourne to Perth in 10 hours, 22 minutes. A return flight shortly after, to Sydney, was accomplished in 9 hours, 32 minutes.

Capt. Neville Stack flew from London to Copenhagen and back in a "Hawk Major," covering the 1,400 miles in 10 hours, 50 minutes. A few days later he flew from London to Naples, via Marseilles and Rome, in 9 hours, 50 minutes, returning next day in ten hours.

*November*.—Lt. Humberto da Cruz, a Portuguese pilot, and Sen. Carlos Bleck flew from Lisbon to Timor, Portuguese East Indies, in a D. H. "Leopard Moth," in 13 days. He arrived back in Lisbon after a total absence of 27 days.

M. Christian Moench, President of the French Aero Club de l'Est, accompanied by M. Jean Latinot, completed a flight, in a D.H. "Leopard Moth," from Marseilles to Madagascar in seven days.

## WORLD'S RECORDS AND RACES DURING 1934

### RECORDS.

#### GREATEST SPEED (LANDPLANES):

France: 314.3 m.p.h. (505.84 km/hr). Raymond Delmotte, on a Caudron monoplane, 370 h.p. Renault 6-cyl. engine, December 25, 1934.

#### GREATEST SPEED (SEAPLANES):

Italy: 440.677 m.p.h. (709.202 km/hr). Francesco Agello, on a Macchi-Castoldi 72 seaplane, 3,000 h.p. Fiat A.S.6 engine, October 23, 1934.

#### GREATEST ALTITUDES:

Italy: 47,353ft. (14,433 m). Renato Donati, on a Caproni 114 biplane, 600 h.p. Bristol "Pegasus," April 11, 1934.

#### Landplanes.

*Speed (100 km).*—France: 268.23 m.p.h. (431.654 km/hr). Raymond Delmotte, on a Caudron 450 monoplane, 300 h.p. Renault 6-cyl. engine, May 24, 1934.

*Speed (1 000 km).*—France: 254.26 m.p.h. (409.184 km/hr). Hélène Boucher, on a Caudron 450 monoplane, 300 h.p. Renault 6-cyl. engine, August 8, 1934.

*Altitude (with 2 000 kg useful load).*—Italy: 27,685ft. (8,438 m). N. di Mauro and G. Olivari, on a Savoia-Marchette 72, three 525 h.p. "Pegasus S.2" engines, May 12, 1934.

*Altitude (with 5 000 kg useful load).*—France: 10,600ft. (3,231 m). Lucien Coupet, on a Farman F.221, four 1,000 h.p. Gnôme-Rhône K.14R.S.D. engines, June 16, 1934.

#### Light Planes (Land).

*Category 1. Speed (100 km).*—France: 181.4 m.p.h. (292.018 km/hr). Raymond Delmotte, on a Caudron C.430 monoplane, 120 h.p. Renault-Bengali engine, March 30, 1934.

*Speed (1 000 km).*—France: 173.38 m.p.h. (279.018 km/hr). Capt. Puget and Lt. Moulignat, on a Caudron "Rafali," 140 h.p. Renault engine, August 18, 1934.

*Category 2. Speed (100 km).*—France: 214.66 m.p.h. (345.622 km/hr). Raymond Delmotte, on a Caudron C.362, 152 h.p. Renault "Bengali," engine, May 2, 1934.

*Category 4. Speed (100 km).*—U.S.A.: 137.5 m.p.h. (221.307 km/hr). S. J. Wittman, on a Wittman-Pobjoy "Special," 75 h.p. Pobjoy engine, February 14, 1934.

#### Seaplanes.

*Distance in Straight Line.*—U.S.A.: 2,399 miles (3,860,823 km). San Francisco to Hawaii. K. McGinnis, M. A. Mitscher, T. P. Wilkinson, C. S. Bolka and G. C. Eddy, on a 10-P-1, two 650 h.p. Wright "Cyclone" engines, Jan 10-11, 1934.

*Distance in Broken Line.*—France: 2,357 miles (3,793,200 km). Berre to St. Louis, Senegal. Bonnet and Jeanpierre, on a Latécoère 300, four 650 h.p. Hispano Suiza engines, December 31, 1933-Jan. 1, 1934.

*Speed (1 000 km).*—U.S.A.: 158.12 m.p.h. (253.601 km/hr). E. Musick, Boris Sergievsky and Charles Lindbergh, on a Sikorsky S-4D, four 670 h.p. Pratt and Whitney "Hornet" engines, August 1, 1934; also seven speed records with loads of 500-700 kg.

*Altitude with 500 kg load.*—France: 31,284ft. (9,532 m). M. Bourdin, on Lioré et Olivier seaplane, two 690 h.p. Hispano Suiza engines, January 29, 1934.

*Altitude with 1 000 kg load.*—France: 24,630ft. (7,507 m). M. Bourdin, on Lioré et Olivier seaplane, two 690 h.p. Hispano Suiza engines, January 3, 1934.

*Altitude with 5 000 kg load.*—U.S.A.: 20,407.8ft. (6,220 m). Boris Sergievsky and R. B. Quick, on a Sikorsky S-42, four 670 h.p. Pratt and Whitney "Hornet" engines, May 17, 1934.

#### Glanders.

*Distance in Straight Line.*—U.S.A.: 158.3 miles (254,789 km). Elmira, New York, to Baskin Ridge, New Jersey. R. C. du Pont, on Pont-Bowlus "Albatros II" June 20, 1934.

#### Women's Records, Landplanes.

*Greatest Speed.*—France: 276.5 m.p.h. (445.028 km/hr). Hélène Boucher, on a Caudron C.450, 315 h.p. Renault-Bengali engine, August 11, 1934.

*Speed (100 km).*—France: 252.64 m.p.h. (412.371 km/hr). Hélène Boucher, on a Caudron C.450, 300 h.p. 6-cyl. Renault engine, August 8, 1934.

#### Women's Records, Light Aeroplanes.

*Category 1. Speed (1 000 km).*—France: 155.4 m.p.h. (250.086 km/hr). Hélène Boucher, on a Caudron "Rafale," 145 h.p. Renault-Bengali, July 8, 1934.

#### Women's Records, Seaplanes.

*Altitude.*—Italy: 18,222.6ft. (5,554 m). C. Negrone, on Breda 15 seaplane, 80 h.p. Isotta Fraschini Asso engine, May 5, 1934.

### RACES AND COMPETITIONS.

*Coupe Deutsch (France):* May 27, won by Maurice Arnoux, on a Caudron C.450 monoplane, 300 h.p. Renault 6-cyl. engine. Speed 241.7 m.p.h. Distance 1,242 miles.

*Vincennes Aerobatic Contest (France):* June 9-10, won by Gerhard Fieseler, on a Fieseler biplane, Walter "Pollux" engine.

*King's Cup.*—(England): July 13, won by H. M. Schofield, on a Monospar S.T.10, two Pobjoy "Niagara" engines. Speed 134.16 m.p.h. Distance 798 miles.

*Circuit of Europe (organised by Polish Aero Club),* September 7.—Won by Baján, on an R.W.D.9 monoplane, Skoda engine. Distance 5,915 miles.

*MacRobertson England to Australia,* October 20-23.—Speed race won by C. W. A. Scott and T. Campbell Black, on a D.H. "Comet" monoplane, two "Gipsy Six R" engines. Distance 11,323 miles. Time 70 hours 59 minutes. Handicap race.—Won by K. D. Parmentier and J. J. Moll, on a Douglas D.C.2 biplane, two 715 h.p. Wright "Cyclone" engines.