WGM-5
Greenland and the Air Age - II

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Dear Dick,

The usual expressions of wonder at arriving in West Greenland from Copenhagen in under five hours by jet are probably old-fashioned by now. People get used to such advances quite quickly, but anyone who had been to Greenland when all transport was by ship will not soon forget tossing about in the stormy North Atlantic. It used to take up to fourteen days by ship, and not too long ago at that.

Developing the polar air route between Europe and North America brought out the significance of Greenland's location. Greenland is used today as a fueling and crew-changing stop for the SAS trans-Atlantic route. But even more important for the Danes, establishment of good and frequent air connections enabled passengers to be transported to and from Greenland at a critical time when numbers of passengers began to swell and shipping space was insufficient. One wonders, however, about the changing significance of northern areas as the range and speed of modern jets increase. Greenland's importance in making possible great circle flying over northern areas is beyond dispute. Yet in 1966 or 1967 long-range jets capable of non-stop flying between Copenhagen and Los Angeles will come into use, so that Greenland will no longer be used for stopping except in an emergency.

When we look at what is happening in air travel in Greenland today, it doesn't seem to matter too much that the big jets will be passing over the island at 35,000 feet. The bug bit when planes had to land there and Greenland will never be the same again.

A fantastic change has taken place in Greenland since local flying on a regular basis started there in 1960. The significance of this change is a bit difficult to understand fully without a knowledge of conditions before 1960. Until 1945 no regular coastal shipping in Greenland existed. Connection between towns was irregular and depended on ships from Denmark as well as a number of small motorboats and other vessels. For many years each of the West Greenland districts was administered as an individual colony. Mail between towns in South and North Greenland was often sent via Copenhagen by ship--the fastest, if not most direct, route!

Coastwise shipping in trans-Atlantic vessels and by small boats and schooners increased after World War II, but this was still a slow method. Not many people traveled about except on official business. The first regular vessel set into coastal shipping was m/s "Tikerak" in 1949. In 1951, s/s "Julius Thomsen" was chartered and later bought from the Cryolite Company

when it was seen that "Tikerak's" capacity could not accommodate the transport needs. In addition, various smaller boats sailed regular routes, especially in Disko Bay and in the Julianehaab area. The so-called "Atlantic ships" also helped out in coastal shipping while visiting various West Greenland towns on their way to or from Denmark. Among these were m/s "Disko" (from 1927) and m/s "Umanak" (from 1949).

The so-called "internal" flying in Greenland began in 1958, actually more in a situation of duress than the result of a long-planned move. The good ship "Umanak", with 46 passengers bound for Søndre Strømfjord and a plane for Copenhagen, had an accident in pack-ice near Ivigtut and was unable to proceed farther than Grønnedal, where it went in for repairs. An experienced Canadian company, Eastern Provincial Airways (EPA) of Gander, Newfoundland was brought in. The stranded passengers were flown on to Søndre Strømfjord and, subsequently, a total of 253 others were flown between Søndre Strømfjord and the west coast during the period 24 April - 8 May in a Catalina aircraft. As I described in WGM-4, it was at this time that air traffic to and from Greenland was beginning its rapid expansion. The Royal Greenland Trading Company (KGH), which is the section of the Ministry for Greenland having internal transportation in Greenland as one of its responsibilities, realized that the hastening tempo of development in Greenland would mean more passengers traveling between Denmark and Greenland each year. KGH also foresaw that an increasing proportion of these would travel by air.

When EPA was brought in to fly a limited number of passengers in 1958, it was not really the spur-of-the-moment decision which I have intimated. In February 1958 (one month before the "Umanak" accident) the Ministry for Greenland set up a commission (Udvalget vedrørende intern flyvning i Grønland) which was to study the need for internal flying in Greenland and the practical and economic possibilities of meeting this need.

The main conclusion of the Commission in a report dated July 1959 was that the best solution for taking care of the rapidly increasing traffic needs to and in Greenland should be based on air transport of passengers. Two important considerations were emphasized:

1. It is far cheaper to fly passengers across the Atlantic and in coastwise transport than to sail them.

2. The time-saving features of flying would be of great importance and would alone justify air travel.

The advantages of flying, it was pointed out, were even more striking in winter. Towns cut off from ocean transport for six months of the year because of ice could be serviced regularly by air instead of dog sledge.

The Commission noted a trend toward more passengers traveling to and from Greenland and that an increasing percentage of these passengers traveled by air. One of the main problems with an increase of air passengers would be to deliver these passengers to their final destination in Greenland. Because both Søndre Strømfjord and Narssarssuaq are located at the heads of deep fjords

hampered by winter ice (Søndre Strømfjord) or pack-ice (Narssarssuaq) and are rather far from the most populous coastal areas of West Greenland, air transport to Greenland could never develop unless a rapid and fairly regular transport system were set up within Greenland itself.

Four choices lay open for expansion of coastal transport in Greenland: ship, conventional aircraft supplemented by ship and/or float planes, helicopters, or amphibians.

The first alternative (by ship) was not very promising because of high costs of shipping, irregularity because of ice conditions, and slow speed.

Conventional aircraft would necessitate construction of landing strips in a rugged coastal area (photos page 3 and 4) where there are possibly two suitable locations. Construction of landing fields, moreover, would be almost prohibitively expensive, and locations of the suitable areas are not really near important population centers. In addition to existing landing fields at Thule, Søndre Strømfjord, and Narssarssuaq, a wartime strip at Marraq could have been brought back into shape, but this is located 100 kilometers south of Godthaab. The two places having suitable terrain conditions for landing strips as suggested by the Greenland Technical Organization were: Sardlup Taserssua (25 kilometers from Godthaab and 4 kilometers from the waters of Godthaabfjord) and Igpigssuaq (20 kilometers south of Jakobshavn in Disko Bay and 3 kilometers from water). Construction costs of landing facilities at these two spots would total 35 million kroner (6.9 = $1). Eight million kroner

The rugged coast of southwest Greenland near Ivigtut

Kangamiut, a settlement in Sukkertoppen District, is located on rocky terrain typical of West Greenland.

would have to be spent bringing Narssarssuaq up to standard, plus about one million kroner to install VHF radio facilities at ten towns. Each landing field would cost .8 million kroner a year to operate, except Narssarssuaq which would cost 1.2 million kroner.

Use of conventional aircraft, even supplemented by small float planes, was clearly not a very promising choice. Had there been suitable topographic conditions for airfields near each of the main towns in West Greenland, however, I have no doubt that conventional aircraft would have been chosen.

Helicopter operations were viewed as ideal from the standpoint of traffic needs and adaptability to the rugged terrain in Greenland, but rather expensive compared to conventional aircraft.

Amphibians (Catalina or Otter on wheel/floats) were considered an ideal stop-gap until a more developed traffic system based either on conventional aircraft or helicopter could be established.

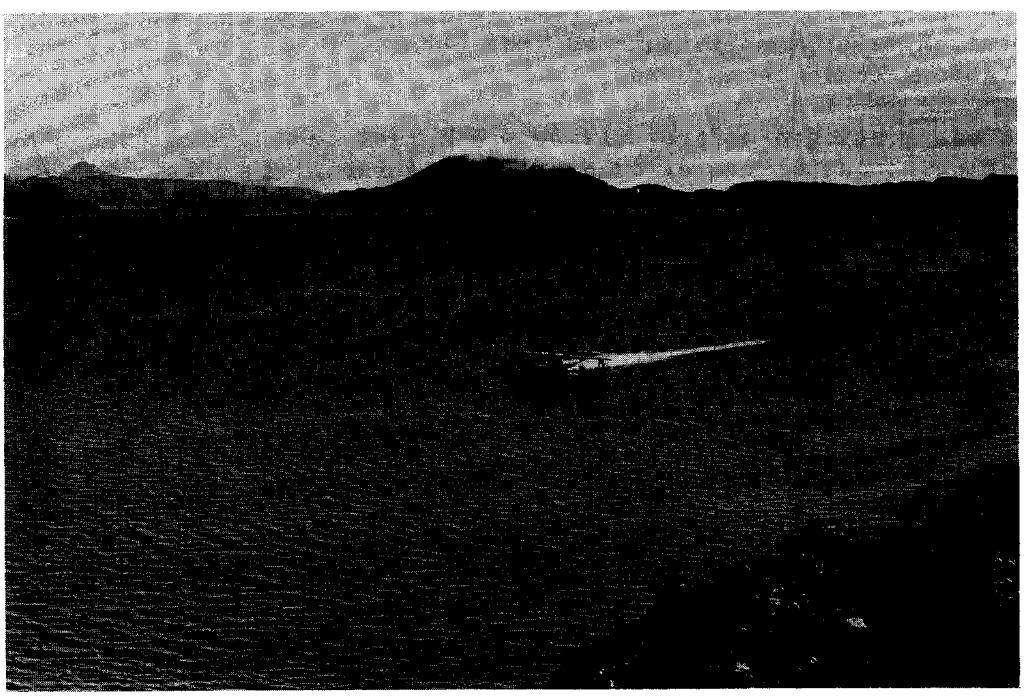
The Commission published its report in July 1959, by which time EPA had been contracted for the second season of flying in West Greenland. Again one Catalina was used, flying three weeks in the spring and from August to mid-November. In all, 1440 passengers were carried.

Regular air connections and scheduled runs were first set up in 1960 as a result of the Flying Commission's report. In the spring of 1960, KGH signed an agreement with Eastern Provincial Airways for regular route flying with two de Haviland Otter (DHC-3) aircraft and one Catalina (PBY-5A). In the first regular season from 1 May to 1 November 1960, 5653 passengers were carried. Of these, 3750 were flown to or from Søndre Strømfjord and the rest on coastwise flights. In the same period the two coastal vessels "Julius Thomsen" and "Tikerak" carried 5750 passengers. During the winter of 1960-61 the Catalina flew ice reconnaissance missions from Narssarssuaq, and the Otters delivered some mail in order to gain winter flying experience.

In 1961 one of the Otters was replaced by another Catalina so that greater regularity and capacity was gained. Otters could fly on VFR (visual flight rules) only, while Catalinas could fly on instruments as well.

The flying season remained May to November for the Catalinas with some winter flying by the Otters when ice conditions allowed use of ski landing gear. As with other northern areas, tricky spring and autumn seasons hindered flying during ice break-up or when the new ice cover in early winter was too thin to support a plane.

Both the Catalinas and Otters used Søndre Strømfjord as home base, while minor repair facilities and a slipway for towing the aircraft up on shore were maintained at Godthaab.



Catalina lands near Godthaab harbor in August 1962.

From 1958, internal air traffic passengers in Greenland increased steadily:

1958 - 299	1962 - 6,607
1959 - 1,440	1963 - 8,935
1960 - 5,653	1964 -11,388
1961 - 7,249	1965 - est. 13,000

EPA's flying record under difficult flying conditions in Greenland was excellent. In 1961, one Otter crash-landed with an engine fire after leaving Søndre Strømfjord. No passengers came to harm, although the pilot died later of burns and other injuries. In May 1962, a Catalina sank on landing at Godthaab killing 15 passengers. No other mishaps occurred during the eight seasons of operation by EPA. Many mercy flights were made, some in bad weather conditions.

Despite favorable performance, long-term objections could be cited against Otters as being too small and against Catalinas for being too old. Difficulty of getting parts, to say nothing of impossibility of buying a new Catalina, since they have gone out of production with no logical successor, meant that KGH would have to look into other possibilities for their future air transport requirements.

Even though a stop-gap measure, the EPA charter required that the Danish Government spend 1.8 million kroner on construction of necessary harbor facilities and water landing places for amphibian aircraft. An equivalent amount was spent on telecommunications so that necessary weather and flight security installations could be assured.

As was mentioned before, flying was a vast improvement over slow and uncomfortable coastal travel by boat in Greenland. Administrative functions, hampered by slowness of connections between towns (there is no telephone network in Greenland), were speeded up so that government officials were beginning to spend more time working and less in traveling, saving the State incalculable amounts in wages. Still, the impact of flying in Greenland must be studied more closely. Economics of the whole question would be interesting to delve into, as a large proportion of the "customers" flying in Greenland are government employees, or are at least flying at government expense.

Ticket prices for coastal passenger transportation in Greenland by ship have always been low, so that travel wishes of as many Greenlanders as possible could be met. In the years 1959 and 1960 ship ticket revenues were about 16% of the total costs involved, resulting in a loss through passenger traffic of about 3.3 million kroner for the two coastal vessels. Flying, on the other hand, was able in its first year to show better operation results. About 60% of the costs involved were covered by passenger ticketing which resulted in an operational deficit of only .7 million kroner. Air tickets were set at twice the cost of corresponding ship tickets, but even had they been the same price, air passengers would have paid for about 30% of the costs involved versus about 16% by ship passengers. All this changed in 1965 when air ticket prices

doubled, with an increase in ship ticket fares as well. Under the old charter system with Otters and Catalinas, air transport would be able to show a slight profit with present ticket prices.

Since internal flying in Greenland has always lost money in direct proportion to the number of passengers flown, and since passenger totals increased from 299 in 1958 to over 11,000 in 1964, it is obvious that the State has had to make up an ever-increasing deficit. For this purpose an amount has been budgeted each year ranging from 1.4 million kroner in 1960 to about 3.0 million kroner in 1964. The government also subsidizes shipping to North and East Greenland (1.1 million kroner in 1961) and coastwise shipping in West Greenland (2.9 million kroner in 1961).

Despite State subsidy, the operating budget for shipping and air transport to and in Greenland during the latest year for which published statistics exist (1961) shows a slight deficit (13,280 kroner). The total subsidy for transport in 1961 was 5.5 million kroner. Costs for Greenland shipping (both to and from Greenland as well as coastal shipping) in 1961 were 26 million kroner and flying costs 10 million kroner. Of the 10 million for flying costs, 7.1 million were for flying to and from Greenland, 2.9 million for internal flying in West Greenland, of which 1.4 million kroner was paid for by State subsidy.

KGH, with responsibility for providing transport services in Greenland, really had no experience in the aviation field. Through the EPA charter it carried out internal flying in Greenland on the basis of advice and assistance of Danish Civil Aviation technicians who worked in cooperation with Canadian aviation authorities, both carrying out inspection services. This task, in the extent to which it was carried out in Greenland, was more than the Danish CAA offers other private flying companies under normal conditions. In the long run, KGH either had to expand its administration with an aviation department or turn over the air traffic to a company having the technical and operational experience. KGH chose the latter course with the idea that the State, represented by KGH, should participate as a stockholder in the company. With KGH participating, air and ship traffic could be coordinated in the best and cheapest way. The State's traditional responsibilities in Greenland could also be upheld and assured with KGH's interest in the company.

With the formation of a new airlines, Greenland's air age passed into its latest and most interesting phase. Grønlandsfly A/S, as the new company is called, is not only one of the world's smallest airlines, but operates in one of the world's largest land masses. Also, Grønlandsfly recently began operation with new jet helicopters, a "first" in northern passenger flying. But more about that in my next letter.

Sincerely,

W. G. Mattox

Received in New York November 17, 1965.