

Vaccine, Health Preserving Fluid, Saves Millions of Lives

250,000 Vaccinations Made in the City of Toronto Without Loss of Limb or Life—Immune to Onslaughts of Dreaded Smallpox

By JOHN BURKE INGRAM
 In our last article, I told you how Edward Jenner, one of mankind's greatest benefactors discovered how to prevent smallpox. I told you how a case prior to his discovery and how in the eighteenth century 69 million Europeans died from it. I told you how the Sovereigns and leaders of Europe, how Parliaments and people all over the world poured honours upon the great Jenner. Today I should like to tell you just exactly what vaccination is, how the vaccine is secured, how it is administered, and a few other interesting facts about mankind's great safeguard against one of the most horrible diseases that ever afflicted the human race.

In the first place, doctors secure a healthy calf. From the time they select the calf till the moment of its painless death it becomes one of the most favoured of animals. It leads the life of Riley or whatever the bovine equivalent to the life of Riley may be. It is bathed gently and carefully, it is excellently fed and cared for, kept clean and healthy. Then they vaccinate it with the germs of cowpox. This gives the calf a mild case of cowpox. Then what happens? Because the calf is healthy its body begins to fight the cowpox germs and it develops what are known as antibodies in order to fight these germs. It is these antibodies that the doctors want to be developed in the blood of human beings; they produce a reaction which enables the human blood to successfully fight smallpox germs, so that these germs are not even permitted to begin their work of causing smallpox.

The process of preparing the vaccine is very interesting. When the calf is ready the doctors chloroform it, wash off that particular part of its skin upon which the vaccine resides have appeared. (This process of washing by the way, sometimes takes a couple of hours so thoroughly it is done. Sterile warm water is used.) The doctors then examine the calf, make sure that its internal

Stage Technique Vs. Screen Acting

Writer Claims Screen Acting Requires Less Experience Than the Stage

London.—Superficially alike in some respects, stage and screen acting differ as completely in their technique as two individuals, outwardly alike, may differ in temperament and character. The two arts frequently are compared, and the question arises which is the greater, especially in the light of the advent of the film, on the ground that, with a more limited means of expression and deprived of the medium of speech, interpretation becomes the more difficult task. But this is a fallacy. As well might one argue that it is easier to drive a pair of horses than one. The act of pantomime, though difficult surely requires less mastery than that of monologue. It is easier to appear than to sound tragic. Many a good artist fails when given a voice to use, and in many a scene, hitherto convincing, the actor's mission is dispelled at the sound of a false note in the voice, especially in tragedy.

The voice is a delicate musical instrument, and correspondingly difficult to keep in tune. Its introduction into the film has shown clearly the limitations of many famous screen artists. Also, many film artists who possess excellent voices are capable only of certain broad effects, since certain roles within the range of their voices are beyond the reach of their talents and they can never scale the heights on the talking film reached by them on the silent screen. Their voices limit their range instead of assisting their art.

This indicates that screen acting is certainly easier than stage acting. Am. actor, in the sound screen may appear to be the most difficult medium of all, this is not really so; for on the screen, talking or otherwise, an actor has seldom to sustain a role for more than two or three minutes at a time. Many vaudeville artists are capable of giving us glimpses of convincing art. In his character songs, Sir Harry Lauder is capable of truly convincing touches. Coleridge said of Edmund Keen that to see him act was "like reading Shakespeare by flashes of lightning." But that is surely not a satisfactory way of reading Shakespeare, though better than nothing. It is possible that this explains Keen's fine performance in plays, essentially flashy. An artist who can convince only in flashes can achieve on the screen a sustained effect with the aid of artifice. The fact that much of his timing is done for him renders his art less difficult. Artificial means render many an artist capable of accomplishing on the screen what his art alone could never achieve on the stage. A certain film artist, who has reached the top of the tree, depends almost entirely on artifice and a plastic individuality. Nor is this any discredit in an art where such are legitimate means.

Thus the screen is a combination of art and artifice, where a very limited talent will take one further than on the stage. Indeed, it often leads to the top of the tree.—G. F. A., in "The Christian Science Monitor."

Aviatrixes Covet Endurance Record



Edna May Cooper (shown) and Miss Bobbie Trout took off from Los Angeles in an attempt to break existing retreating endurance records.

Sunday School Lesson

January 25. Lesson IV—Jesus Tempted.—Luke 4: 1-13. Golden Text—In that he himself hath suffered being tempted, he is to succour them that are tempted.—Hebrews 2: 18.

The temptation narrative is really part of the Baptism story, though Luke has inserted the story of Jesus between the two events. Pictures of the Baptism which are familiar to us suggest some sudden light in the sky and a mysterious thundering voice from heaven, but that seems to be far from the Evangelist's meaning. The Baptism of Jesus, he tells us in his pictorial Jewish way, was for him the occasion of a new and profound religious experience; the voice from heaven spoke to Jesus and to Jesus alone. We are not able to enter into the soul of Jesus as to understand exactly the nature of this experience. The early Christians thought of it as being like their own baptismal experience, a receiving of the Holy Spirit; in Jesus' case it seems to have been an experience which sent him forth upon his public ministry. Some thirty years had lived quietly in Nazareth, attracting no public attention to himself, but now the word of God came to him, bidding him come out before the people. It has often been supposed that Jesus, at his Baptism, first realized that he was the unique Son of God, or that he was Messiah; but this is quite uncertain. The temptation narrative, connected with the Baptism, because we are told that the same Spirit, which descended upon him at his baptism, also drove him into the wilderness.

In order to understand the temptation story we must recognize what kind of a story it is. Children often ask us whether the tale we are telling them is true; their question is sometimes difficult to answer. For instance, is the "Pilgrim's Progress" a true story? Surely it is one of the truest of true stories, but of course, it is not literally true; there is no real castle of Giant Despair, no literal Apollyon to straddle across our way. In what sense exactly are we to say that the temptation narrative is a true story? We involve ourselves in very grave perplexities if we try to maintain that it is literally true. Can we, for instance, say that the Spirit of God literally drives any one to be tempted by the devil? Or how are we to picture the devil, or in the air, or from the earth as he can be seen at once? Obviously the story was told when men believed the world to be flat. But we misunderstand the story if we get ourselves into these difficulties. If a friend should tell us that he was at one time greatly tempted to be dishonest, and that for a week he had to fight the devil, we should perfectly understand him, but we should not take his words literally, and ask him who he fought with a sword or a run. So here we shall miss the real meaning of the story, and get involved in useless discussions if we do not take it spiritually and interpret it, as best we can, of Jesus' inward experience of temptation.

Many interpretations of the temptations have been offered, and we can never be sure that we have caught

the whole meaning of them. It seems clear, however, that Jesus went away into solitude in order to think out the implications of his baptismal experience; hence, the repeated phrase, "If thou be the Son of God."

The temptation to make stones into bread might be either of two things; it might be the temptation to do private miracles for his own comfort and advantage, or it might be to attain his Messianic, his kingship, by dealing first with economic problems. The Romans knew well that any ruler could win popularity if he would give the people "bread and circuses" for nothing.

The temptation to win world-empire by worshipping the devil suggests that he was tempted to use worldly means to achieve spiritual results. Propaganda, war, party-splitting, bribes, have too often been used by Christians to serve the cause of the church, but Jesus would not bribe nor cajole, nor force men into the kingdom; they must enter with their eyes open, because they understand and love.

The Jews demanded of him some sign from heaven, some miraculous proof of his claims, but if they would not believe Moses and the prophets (Luke 16: 31); if they were not able to judge of the authority of John the Baptist (Mark 11: 27-33), he would not cast himself down from the Temple, nor do any such miracle to prove his claims.

Then the devil left him "for a time," or "till his opportunity." The verse, perhaps, looks forward to Gethsemane.

"Luke omits in his narrative the ministry of angels mentioned by the other two synoptists, a sweet postlude we should have missed much, had it been wanting; but he gives us instead the retreat of the adversary: 'He departed from him for a season.' How long a season it was we do not know, but a brief one it must have been, for again and again in the story of the gospels we see the dark shadow of the evil one, while in Gethsemane the 'prince of this world' cometh, but to find 'nothing in me.' And what was the horror of great darkness, that strange eclipse of soul Jesus suffered upon Calvary, but the same fearful presence, interloping for a time even in the Father's smile?"

Forest Resources Valuable
 Next to her wealth of arable lands, Canada's forests are her greatest natural resource. The total forest area is estimated to be 1,151,454 square miles. Preservation measures to conserve forests include fire prevention and control (by fire rangers aided by watch towers, airplane patrol and transportation, telephones and radio communication, power pumps, etc.), protection against pests, reforestation, strict protective legislation, educational propaganda and Dominion and Provincial reserves.

A TRUE HEART
 When a strong brain is weighed with a true heart, it seems to me like balancing a bubble against a wedge of gold.
 Stranger: "What do you do for a living?" Rastus: "Nuthin', suh."
 Stranger: "Well, that's a pleasant job, I must say. No worries attached to it?" Rastus: "Nawshuh. 'Ceptin' I might lose it."

New Theory Advanced of How The Sun Renews Its Youth

That our sun renews its youth every ten million years or so in a bath of fire, like the mythological phoenix imagined to rise anew from the ashes of its funeral pyre, is the belief of Dr. Hugo von Zeipel, of the Astronomical Observatory at Upsala, Sweden, expressed in a monograph recently before the New York Academy of Sciences. It has long been known to scientific men that neither combustion like that of fuels, nor any other ordinary source of heat could possibly supply the sun with the enormous energy which it pours out continually into space as light and heat. Most scientists believe that the sun is kept going by some kind of atomic energy, a secret which earthly laboratories have not yet learned. The usual idea is that this atomic energy is set free more or less uniformly inside the sun, so that each day's output of light and heat is balanced approximately by each day's supply of new energy from atoms. This is where Dr. von Zeipel's theory differs. He imagines the release of atomic energy inside the sun to happen only at long intervals and by means of a kind of explosion, making the sun for a few days of weeks far hotter than usual and leaving it somewhat larger. Then the burst of atomic explosion ceases and the sun gradually decreases in size and heat for ten million years or more, when these come another explosion and another rejuvenation of the solar energy. Astronomers have seen other stars going through experiences not unlike this, but it has been imagined that any such sudden outbursts of light from our sun would have wiped all life from our earth. This might not be true, Dr. Zeipel contends. If the released energy were absorbed more or less completely by the enlargement of the sun itself, so that any hot blast accompanying the explosion would cease in a few days and leave the enlarged and rejuvenated sun to spend its new supply of energy gradually during the next few million years.

Stock Betterment Urged on Farmers

Most Vital Problems Faced by Dairy Industry Today, Says Commissioner

Corwall.—Periodical testing of herds and direct efforts at improvement of stock are the most important questions before Canadian dairy farmers today, said Dr. J. A. Ruddick, Dominion Dairy Commissioner, in a address before the annual convention of the Dairymen's Association of Eastern Ontario.

Farmers were feeling the pinch of low prices, but, he said, the average farmer "is losing very nearly, if not quite, as much every year by his failure to give attention to this matter as he is through the drop in values at the present time."

After explaining that in New Zealand the group testing system had so improved the quality of cattle that the average annual yield of butter fat had increased from 175 to 229 pounds for each cow, Dr. Ruddick said:

"The average annual yield of milk per cow in Canada is now thought to be about 4,500 pounds, or the equivalent of just about 490 pounds of cheese. If this yield were increased by 20 per cent, which is easily possible, it would be equal to an increase of 21 cents a pound on the original 400 pounds of cheese at 15 cents a pound, after allowing for the cost of manufacture."

From reports already received, the Commissioner estimated butter production in 1930 was probably 10,000,000 pounds higher than in 1929, which in turn had been 6,000,000 pounds greater than in 1918. If the estimate were justified by complete returns, 1930 would show the greatest increase in butter production since 1914.

Foreign Air Mail Routes Arranged in Divisions

Ottawa.—Grouping of all foreign air-mail routes into four divisions as the basis for Canadian charges will be made by the Postoffice Department. Officials declared that this did not mean a revision of charges so much as a grouping of the routes themselves. The plan would apply chiefly to far-away points as South American cities. The postage, including fees for all air-mail services available to any places in Canada, Great Britain, the Irish Free State, Newfoundland and the United States, will be 5 cents for the first ounce and 10 cents for each additional ounce.

Maritime Loadings in 1930 Best in Dominion

Halifax.—In revenue freight tonnage loaded and unloaded in Canada during the first nine months of 1930, the maritime provinces sustained approximately only one-third the percentage decrease recorded in other sections of the Dominion in comparison with the same period in 1929. Official figures for the period show 7,701,536 tons of freight loaded in the maritimes, as against 8,091,648 tons for the first three quarters of the preceding year, a decrease of 4.8 per cent. This compares with a decrease from 28,556,480 tons to 23,639,922, or 17.4 per cent. for central Canada, 10.9 per cent. for the prairie provinces, and 18.4 per cent. in British Columbia. The drop for all Canada was from 57,853,414 to 49,820,284 or 13.9 per cent. Maritime unloadings shrank from 7,362,374 to 6,925,013, a drop of 5.9 per cent. The decrease for the Dominion was 24.3, the total declining from 59,736,501 to 51,207,656.

A comparison of September, 1930, with the same month of the preceding year, shows increased grain loadings in the West reflected by a 16.2 per cent. increase in figures for the prairie provinces, whereas the central Canada zone suffered a 25.5 per cent. drop. The Dominion decrease was 7.4 per cent., and loadings in the Maritimes for the month were 7 per cent. under the previous September.

Loading during September for the Dominion was 1.3 per cent. less, the prairie provinces had the most favorable position with a decline of 5 while the maritimes came second with 9.8.

Oxford Shrine Damaged By Death-Watch Beetle

Oxford, Eng.—Extensive damage by the death-watch beetle is threatening the Shrine of St. Mary the Virgin at the University of Oxford church. The church is the mecca for many American visitors who trace their families through Colonial figures.

Damage to the church was discovered when experts were checking it for cracks caused by traffic vibrations. Immediate action is planned to remedy the damage and stop further attacks.

Tiny Planet May Be Used As Yardstick

By Astronomers

Washington.—A new yardstick to measure the solar system is envisioned in the tiny planet Eros, which will come within 16,000,000 miles of the earth on Jan. 29.

Astronomical cameras in widely separated observatories are now being trained on this moving point of light in a world co-operative program sponsored by the International Astronomical Union.

Eros approaches the earth at certain times nearer than any other measurable celestial body, except the moon. An eccentric orbit brings it close to the earth only at long intervals, the last comparatively near approach occurring in 1900-01, when the distance was about 30,000,000 miles.

Eros will swing well within the orbit of Mars, but will stay outside the earth's orbit. Judged by its brightness, it has a diameter of 15 miles, astronomers say. Because of a queer habit of disappearing at certain stages of its progress Eros is believed irregular in form.

Eros is important to astronomers since it comes relatively close to the earth, and is so small it can be considered a mathematical point with no mass, breadth or thickness to upset calculations. The naval observatory said Eros affords the best opportunity to determine what astronomers do not know—the exact distance of any object in the solar system.

The present yardstick for measuring planetary distances is the space between the earth and the sun. Astronomers can determine precisely that an object in the heavens is so many times as far away as the sun, or a fraction as far. This can, after a fashion, be reduced to terms of miles but with a probable high degree of error, because it is not known exactly how distant is the sun.

Sun Is Time-Piece Of Eastern Tribes

Missionary Discovers Ancient Time System — Clock Does Not Register During Night

Mogador (Morocco)—Father Gagnon, a "White Father" missionary, a ploration trip through little known parts of French West Africa and the Gold Coast, brought back a report of one of the most poetical time keeping systems that man ever used.

The Gold Coast natives of the hinterlands have used a clock of 13 hours, from darkness-before-dawn to darkness-after-sleep, but during eight hours of the night there is a void in the clock.

Father Gagnon translated the clock, as follows:

- When the roosters crow, 4 a.m.
- When the earth begins to grow, light, 5 a.m.
- When the sun appears, 6 a.m.
- When the sun is adult, 8 a.m.
- When the sun shines everywhere, 9 a.m.
- When the sun's rays burn, 11 a.m.
- When the sun turns down, 3 p.m.
- When the sun's rays grow softer, 4 p.m.
- When the sun turns red, 5 p.m.
- When the sun sleeps, 6 p.m.
- When the earth is given back by the sun, 7 p.m.
- When sleep approaches, 8 p.m.
- When sleep has come, 9 p.m.

\$4,210,140 Surplus Shown By Quebec

Total Revenue for Province Was \$43,585,140, and Expenditure \$39,374,910

Quebec.—A surplus of \$4,210,140.83, in the finances of the Province for the fiscal year ended June 30, 1930, was announced in the public accounts, tabled recently in the Legislative Assembly by Hon. L. A. Taschereau, Premier and Provincial Treasurer. The total revenue of the Province for the year under review was fixed at \$43,585,140.83, while the total expenditure was \$39,374,910.80. A sum of \$2,449,500 was placed apart for the reduction of the Provincial debt.

Prominent among the revenues of the Province was that obtained from the liquor law operations, which brought \$8,500,701.76. The gasoline tax rendered \$3,372,053.

Harold—"You used to say there was something about me you liked." Gladys—"Yes, but you've spent it all now."

Scholarships Given To Young Farmers

Essay Contest Winners for Province Also Announced

Toronto.—Announcement of the winners of the 15 scholarships donated by the T. Eaton Company, Limited, Toronto, to the members of the 1930 "Royal 500," has been made by the Ontario Department of Agriculture. These scholarships of \$100 each are to be applied on a regular course at the Ontario Agricultural College.

One hundred and ninety-eight tried the examination which was held in each county and district of the province under the supervision of the agricultural representatives.

The winners are as follows: Bruce County, George Downey of Tiverton; Kent County, William Keyes of Ridgeway; Wellington, Thomas McLaughlin of Drayton; Middlesex, Cameron McTaggart of Appin; York County, Alexander W. Davidson of Agincourt; Ontario, John Dryden of Brookline; Durham, James Hancock of Courtice; Dufferin, Austin Brown of Shelburne; Dundas, Phil Strader of Williamsburg; Prince Edward, Gordon Reid of Milford; Carleton Place, James McNeil of Kars; Fort William, Gladstone Miller of Rosslyn Village; Rainy River, Ernest J. Gosselin of Rainy River; Manitowish, Raymond Baker of Poplar.

These youths will enter the Ontario Agricultural College next September in either the associate or degree course. The Ontario Government, it is understood, is cancelling all tuition fees for such winners during the first two years of their courses.

Essay Contest Winners
 As a follow-up to the 1930 Royal 500 Party, the department of agriculture conducted an essay contest open to all members of the party.

In addition to local prizes offered for the three best essays in each county, the ten best essays in the province received free transportation, board and lodging for two weeks while attending one of the short courses at the Ontario Agricultural College, Guelph, or the Kemptonville Agricultural School.

The winners of the prizes are as follows: Glengarry County, Donald Watt, Lancaster; Grey, Wallace Holladay, Mount Forest; Halton, Jack Lawson, Acton; Lanark, R. Sherwood Lumsden, Smith's Falls; Leeds, Kenneth Bolton, Bellamy; Northumberland, Norman Flindall, Trenton; Perth, Mervyn Oehm, Stratford; South Simcoe, William J. S. Grant, Stayner; Sudbury, Wallace Mooney, Massey; Waterloo, Sherwood Taylor, Galt.

Disease Among Reindeer Now Under Control

Toronto.—Governmental methods of preventing disease among reindeer in Northern Canada were detailed by Dr. S. Hadwen, Ontario Research Foundation, at the regular monthly meeting of the Toronto Humane Society here.

Disease was depicted in the herds in the North. Dr. Hadwen said, and every effort was being made to control it. Reindeer were not only useful for northern transportation, but were almost a necessity for food during winter months when districts were cut off from supply posts.

T. J. Kelso, vice-president, presided.

Small son—"If you don't give me a penny I will go and see Johnny Jones who has measles, and then I shall have them."

Dominion's Output Of Butter Gaining

Canada to Supply Own Needs in Two Years, Says Ruddick

Ottawa.—Canada will be producing all the butter she requires within two years and the question of importing butter from New Zealand, and Australia will then no longer be one of prime importance to the dairy industry in this country. This view was expressed by Dr. J. A. Ruddick, Dairy Commissioner, here, on Jan. 10th. Dr. Ruddick had been discussing the situation with an English exporter who called him up from London with respect to the re-exporting of New Zealand and Australian butter to Canada. He explained that considerable butter comes from the Antipodes to Canada by that route.

The low price of grain is having a stimulating effect on butter production in Canada. The production of both cheeses and butter doubled last month as compared with the corresponding month in 1929. The mild weather and the low price of feed encouraged the farmers to keep their cows milking later than had been their practice in former years despite the lower price of butter.

About 10,000,000 pounds more creamery butter was produced in the Dominion during 1930 than in 1929 and about 30,000,000 pounds was imported. Dr. Ruddick thought that the farmers were seeking to make up for the lower price by increased production.

As a rule milk prices in the cities have not dropped and the farmers supplying milk for city distribution for the most part are faring better than those who are sending their milk to the butter or cheese factories.

January

There's not a singing robin In all the northern land,
 But a grey gull preens its plumage Beside the hoarse-voiced strand.

There's not a heaven-sent bluebird In all this world of white,
 But a great owl winged with silence Passed over me last night.

There's not a song at morning, And not a song at eve,
 And the woods for old companions With saddest murmurs grieve.

There's no snowflakes in the hammock The oriole weavers hung,
 And snowflakes where the thrushes Their golden vespers sung.

But, oh, the little people, All clad in sombre grey,
 Who come to seek my bounty Each bitter winter day.

To taste a bit of suet,
 To find the smallest seed,
 To thank me with their chatter And chirping sweet indeed!

And though there's not a robin, Not any bird that sings,
 I love the little people,
 The winter always brings.

—Lillian E. Andrews in "The New Outlook."

A vicar was visiting one of his poorer parishioners, an old woman afflicted with deafness, who expressed her great regret at not being able to hear his sermons. Desiring to be sympathetic, he said with unnecessary self-depreciation: "You don't miss much." "So they tell me!" was the unexpected reply.

Big Decrease Shown For 1930 Accidents

Fatalities Are Slightly Up However — Compensation Less Than in 1929

A summary of figures by the Workmen's Compensation Board of Ontario for 1930 shows a total of 69,267 accidents reported during the year, a decrease of 17,836 from the number during the previous year.

Fatal accidents numbered 520, as compared with 510 during 1929.

The total benefits awarded during the year amounted to \$7,423,018.82, as compared with \$8,012,157.78 during 1929, the 1930 figures being made up of \$6,086,972.77 compensation and \$1,336,046.05 medical aid.

Taking a basis of 300 working days, this would show average daily benefits awarded of \$24,745, requiring an average of 855 cheques per day. There was a decrease in the average number of new claims in the average number 290 in 1929 to 231 in 1930.

Accidents reported during December numbered 4,694, compared with 6,289 in December the previous year.

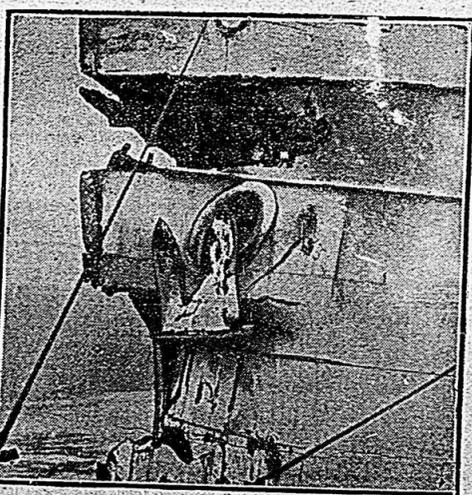
Argentina Reports More Pigs and Sheep

Buenos Aires, Arg.—Large increases in the number of sheep and pigs in this country and a sharp decrease in the number of cows since the last agricultural census taken in 1922, was revealed by the new census which has just been completed. The total number of cows decreased 5,000,000 to 2,211,855, sheep increased 14,000,000 to 44,413,221, and pigs increased 2,300,000 to 3,768,738, according to the new census.

"Madam," he said, "there is something you need in this shop. The work is too heavy for you. Tell me, do you never feel the need for help?" The woman giggled. He smiled. "A woman like you," he proceeded, "should not have to do such work as carrying. You can be saved all the weariness and worry if you will allow me to—". There something like a thunderbolt descended on him. When he awoke, he was in bed. . . . In the course of time, his pals gathered round him. "We both made a mistake," explained the sufferer. "I didn't know she was taking it as a proposal; and she didn't know her husband was in the back room."

Life is like a book; fools scamper through it hastily; the wise man reads it with attention, because he knows he can read it only once.—Jean Paul Richter.

45 Lives Lost in Collision



Forty-five people lost their lives when Finnish ship Oberon collided with S.S. Arcturus and sank within three minutes, between Denmark and Sweden. Above is view of damaged Arcturus bow.