Hello from Sigvard Andersson in Sweden. I am a 35 years old weatherman, and I have been a DX-er for more than 15 years. Since 1973 I listen almost only for North American (NA) MW-stations. For that purpose I go to Northern Sweden once or twice every season together with other DX-ers. Now I've gone for 13 expeditions to Killingi ($67^{0}30$ 'N $20^{0}15$ 'E) and to Karesuando ($68^{0}25$ 'N $22^{0}30$ 'E).

The NA season is naturally in the Winter here, but even in the middle of the Summer, DX-ers in Southernmost Sweden can sometimes hear the strong East Coast stations, WQXR, WEZE, CJYQ, CBN, CKCW, VOCM, etc. Our best NA cx are generally in October, December - January and March, when the NA stations come in for a couple of hours after midnight and about an hour around SR here in Southern Sweden, but not every night. During a bad season a couple of nights a month (this season 1978/79 has been very bad), during a good season about 10 nights a month. And the further North we go, the longer ti-me, the more nights (and days) we can listen and the more stations we can hear. Here we listen mostly to the East Co-asters, in the North dominate the WC- and Prairie-stations. At bad cx the radio signals come in only on Southern paths, so during nightime we hear stations only in the sector In-dia - Iran - Europe - Brazil. After a "down" the cx used to improve (not this season, hi), and 3 - 7 days later we can listen to the Philippines in the evening and Northern LA late at night and in the morning. After further 2 - 4 days Japan comes in in the afternoon - evening, and after mid-night we hear EC NA stations. If the cx become very good, the NA stns might go to the next morning or (noon). The following night we might hear stations from the Great - Lakes area and the Prairie. A day full of WC stns can follow, and



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then Alaskan and Pacific stns (Hawaii, NZ and Australia). At last a geomagnetic storm spoils the fun, and we are back at the Indian and Brazilian stations again. This is a general description, and it can change due to periods with very good or very bad cx, and it fits best for middle Sweden, even if we do not hear Pacific there. In Southernmost Sweden of cause no Pacifics; the only logged stations from the a-rea West of Iowa are a few high-powered ones. In Northern-most Sweden not many LA stns, but NA might go for 24 hours a day during very good cx, and in Winter during the years around the sunspotminimum, from

Jan -75 to Dec -77, we heard NA stations every day, whenever we were there.

10 years ago three DX-ers from our local club in Stockholm went to Northern Sweden for a DXpedition. Many others became also interested, so the following year five of us went for our first DXpedition to the little village Killingi in the North. We went right after Christmas and stayed for 9 days in an old school. In the middle of the Winter the days are short there, 110 km North of the Arctic Circle, only 2-3 hours of daylight. The temperature varied between 30 above and 26 below DOF. Deep snow made it hard to put up antennas. But the possibilities for antennas are limited in Kil-

lingi (no trees), and we did not know much about Beverages then, so the antennas were 30 - 100 meters long only. We did not hear much interesting in MW; not even one single NA! Most Europeans. But we managed better in SW: Fiji, Noumea, SIBS, FEN, Timor, New Guinea stations, etc.

A DXpedition is not only DX-ing; it is also to be together several days and nights, discussing, experimenting with re-ceivers and antennas, cooking, a lot of practical jokes, playing cards, etc. etc.

Home again, we planned for the next expedition. We went to Killingi five times for periods of 2 to 3 weeks, we learnt more about antennas and tried better directions and made them longer. So we managed much better in NA-listening. I remember especially the good cx on the 1st - 3rd of January 1975. We learnt how to use the propagation forecasts, A-in-dex and Solar Flux from WWV. In 1971-72 an Italian DX-er took part in the expedition, in 1974-75 two Germans. Then some of us stayed three weeks but others arrived and left; all together we were 11 participants, but it was too much organization work.

After our successful MW DX-ing in Killingi, I became very interested in NA AM stations, and I tried to find another QTH with better antenna possibilities and further North, as it seemed to me that every km further North is important. So we tried the village Karesuando right at the border to Finland, 200 km North of the Arctic Circle. There it is still darker and colder than in Killingi. Once it was 46° below 0: For me it is a 30 hours' trip to go there by train and bus. An old boardinghouse fitted good. We did not have to cook ourselves. The terrain sloping down in SW-W-NW-N-NE, no roads, no powerlines, only wood, so the antenna-possibilities are limitless. From the house you can see the hori-zon in the "right" directions - perfect for DX-signals! The conditions around are perfect, so it must be something wrong with the listening. And it is. A very strong local electric disturbance -- it can be 20 dB over S9! Sometimes it can be on for days and nights without any break, but it can also be gone for long periods, like at my first expedition there or at the last one in December, when we had it during the first two days irregularly and then it was gone for 10 days, it came back only some days be-



fore we went home again. Three electricians worked with it for several days without finding anything. Thanks to special antenna-arrangement, the situation has not been desperate. But at the last expedition, in Ja-nuary, the "expeditors" heard the same "buzzing" sound, when they passed an outdoor transformer on their way from the sauna. The called electricians fixed something, and the disturbance was gone. So I think that after 14 more or less disturbed expeditions in Karesuando, we have at last got rid of the fault. We have learnt that long antennas close to each other "steal" signalstrength from each other, and that one gets problems with VFO-signalinterferences, if one has too many receivers together.

So we have been only 2 or 3 DX-ers on "my" expeditions in Karesuando.

We bring 2000 - 5000 meters antenna-wire each, or we have left them there, so that we do not have to carry them every time (1000 meters weigh almost 50 pounds), but we do not always use all of them; we need time for DX-ing also, hi. Everybody have 3-5 antennas, all between 400 and 1500 meters long. As the wires are plastic-isolated, we just put them on the treebranches and busches. We are careful about the antenna-directions, so to get them quite straight, we use compasses, but the height can vary from 3 to 15 meters. We have also tried to put the wires just on the ground and we have not noticed any differences, but they might be spoiled by animals and snow-scoters, especially on the small lakes which the antennas pass. My receiver is a Drake R-4 with a MW-converter

(built with the very good tube 7360, which I can recomend for those who still use tubes), and it



works excellent. Other receivers used at Karesuando are Drake SPR4 and SSR1, Collins R390 A, also known as good receivers.

Of cause we bring taperecorders to record what we hear. Also WRH, NRC:s Domestic Log and Pattern Book, Broadcasting Yearbook, lists o-

ver logged stations etc, diagrams for silent peri-ods and SR/SS-maps over the Northern hemisphere.

(Times given here are our local time = EST + 6h). Some participants listen for Japanese stations, which we can hear in the afternoon and evening (once when the cx were very good, they came in already around 10 am!), but the main-interest is of cause NA stations.

Even if the <u>cx are below normal</u>, we can hear 10-15 stations in the morning, e.g. KJNP, KBRW, CFCW, KSL, KOMO, CFUN, KFBK. But that's all.

During normal cx or a little better the first stations go for an hour or two right after midnight; the very first ones from Quebec: CHRM, CFLP, CFVL, CJRS, CFDA, CKO, CJFP, CJTR, CJMC, etc, but soon we also get stations from the rest of Northern EC and Great Lakes, e.g. WBZ, WCFL, WPTR, KSTP, WDGY, WCAU, WWVA, CBD, CBI, CFRW, etc. Often a fade-out during the following hours, and we get some sleep.



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are back around 4 am and go for about 4 hours: EC and Great Lakes stations, and also stations from the Southern states: WWL, WSB, KAAY, KSAL, KVGB, etc. In December we get a little more sleep; the good strengths are back between 7 & 8 am and we listen to 50-80 stations, about 10 from Alas-ka, for 3-4 hours. Around 8am the cx change to Prairie, WC and Alaska, but often we also

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have EC stations till noon, so an opening can be very wide. Another fade-out around noon. In the afternoon mostly Prairie and WC stations for a couple of hours, also CHAK and CFYK. Between 6 and 7 pm an Alaska opening. Then we often hear KSRM, KNOM, KCAM and KICY, which are difficult to hear in the morning. (Stations mentioned here are rather common. Others can vary often).

During $\frac{\text{good}}{\text{at}} \frac{\text{cx}}{10}$ the Quebec stations might come in already at 10 å 11 pm, soon followed by EC, Great Lakes and Prairie. No fade-outs; we can listen non stop till the next evening! No time to think of food; maybe a quick cup of tea and some bread and butter. -The channels are crowded and we hear many stations, e.g. in the morning WNAX, CFWH, WTMJ, KIDO, KOOK, CFAX, KSEN, CFFB, KTLC, KOWB, KEIN, CJDC, KSRV, KCIM, KRED, KVWO, KPMC, KRAD, all Ala-

skan stations with 5 kW or more, some Hawaiian stations and some "graveyarders". In the afternoon we can also hear Southern California: KDAY and KBBO. When the WC stations have faded out, we still have 12 - 16 Alaskan ones, some can be heard non-stop till the next day (KJNP, KBRW). Sometimes during good cx an area of



one or two states can be favoured. Then we can hear stations which otherwise are disturbed.

During periods of bad cx we sometimes have "pointcx" (as we call it). Stations from a small area or a city can be heard, but nothing else.

We listen regularly for Solar Flux, A-index and Kindex from WWV. Then we often know which cx we can expect. But that is more useful at home. At an expedition we listen anyhow, at home it is good to know which night and morning we shall stay up lis-tening, so that we don't spoil the sleep all nights a week, especially if we work during days. A high A-index means bad cx in Southern Sweden, but in the North it is not necessarily so. Instead the cx can become very interesting: In Dec 1976 A-index was 20 and the day after gave rather "rare" stations among many others, e.g. KBLW, KDKO, KRED, KOMA, KSRV, KSAL, CHFC, CHAT, KNOM and KOB. In Dec 1977 A-index was 37 one day, 33 another day. The nights

and days after gave also interesting stations, and at one night Quebec started very early. CHRM came in strong when I tuned it in at 10.13 pm! Soon followed e.g. CJRS, CKRB, CJMC, CKBM, etc. On October 27th 1977 A-index was 38. Around 10pm a station came in on 1220, and it was CJRB in Boissevain,



where it was SS more than 2 hours later! It might as well have been a daytime station! During normal cx a DT is almost impossible for us to hear, as a station comes in here about 2 hours after its SS, and then a DT has closed long ago. Also CFRW, CKOY and CKLQ were logged before the sun reached the ho-rizon at the stations. And I even managed to take a DT. It was KQWB, ND on 1550 at 11.39, about 40 minutes before SS there. (This was before it became AN. However, its nightpattern is so bad for us, so I think that it is impossible to hear it here). So nowadays I hope that A-index will rise during our expeditions. During these good MW-years, Solar Flux was very low; it could stay below 70 for weeks, but mostly small variations, it could reach the value 90. Today it is around 200! And it seems to be negative for the cx. But it can be MW-cx during high Solar Flux, if A-index is low. During the long sunspotminimum (1975-76-77) both A-index and Solar Flux could be low, still the cx were bad (especially in November and February). So it must be at least one more factor that influences the cx. Here we do not know what that is; if we knew, it might be easier to make propagation forecasts.

KOWB verified my report and that is one of my best QSL:s. On the other hand, a DT station that did not verify (in spite of f/u:s), is KTYN. Also that in ND. I heard it in January -76 in the afternoon. It had just opened for the morning, and it came in for a whole hour. It was before SR there, so it used "PSA" power, and the "path" was in darkness the whole way from Minot to Karesuando. That explains why I could hear it. A few days earlier another participant logged the DT KGHO on 1560, WA, also that in the afternoon, and the station used PSA power. At DXpeditions in Northernmost Finland they have logged the DT:s KXL -750, WJJD - 1160 and WLIB - 1190. Also in Norway one or two DT:s were logged about 10 years ago.



During the last 10 years we have logged about 700 NA stations here in Northern Europe (Norway, Sweden and Finland). In Finland the DX-ers have also made DXpeditions. As they can go further North than we can, they have managed still better. They have logged about 80 stations that we have not heard; on the other hand we have 40 stations that they have not.

In the "graveyards" we often have many stations, but they fade in and out, so mostly we miss the ID:s. From those 700 stations 55 are "graveyarders", many of them logged in Northern Finland. I myself have not been very lucky in the graveyards; I have waited for ID:s for hours, but I have got only a few stations: AFRS, Eielson, AK on 1490 with local px (only 50W! I did not think it was possible for a 50W station to reach us, until I heard it with my own ears), and KPAG, CO on 1400. But the staff at KPAG thought that it was only noise on my tape. Of cause, hearing a station is not the same thing for them as it is for us, hi. But I think that at KPAG they should have recognized the ID:s and the slogan, which I wrote down word by word. Also a timecheck and a tempcheck. Weak signal but no interference at all, so listening carefully, it was easy to pick it up. Maybe it was the bad tape that spoiled my report.

During the first expeditions, in Killingi, we got greetings from the stations DLF and HCJB. They played records for us, which we had asked for. We always had DLF to play "North to Alaska", because then we thought that it was extra interesting to hear Alaska, hi. KJNP was our "house-station", till the last season's expeditions. After Nov. 23rd last year, when 1170 became a standard fq here in Europe, we cannot enjoy KJNP that much any more. But now we have KBRW-680, in stead. We also got KJNP to send us greetings. They did not say hello at the day and the time that I had asked for, but say neilo at the day and the time that I had asked for, but on the next day they did, and we were lucky listening to them just then. They also played Swedish songs for us. In 1973 I sent to KJNP a tape with a recording of their pro-gram received in Killingi. Don Nelson, director of KJNP, wrote to me that "...We never dreamed that it would be that clear over there....". Further down: "We are considering a 30 minutes or 1 hour Swedish program if we can find someone here that can produce it" And KINP also had a Swedich re here that can produce it". And KJNP also had a Swedish px for a year or two. I hope that it was not because of my tape, but I wrote to Don and assured him that KJNP could be heard here only by us with our special receivers and long antennas.

In the seasons 75/76, 76/77 and 77/78 there were 10 - 15 different DXpeditions every Winter, and only a few failed. This Winter only half that many, and the cx have been very bad, also. Good cx only once this season, and it was during the first half of December. Then we (another DX-er and I) were on our expedition in Karesuando, so we were lucky. Only one more expedition managed good, and it was one in Fin-land. So I think that next year we will not have many expeditions. But I will go again, for the 14th time. I might as well just shut my eyes and put my finger in the almenack, to see when to go. Making a propagation forecast seems to be impossible in this year of high sun-activity, as diffi-cult as my daily work can be sometimes - making longrange weatherforecasts.



73's.