

DXer

N O R T H E R N
C A L I F O R N I A
D X C L U B



Inside

BoD Minutes — W6VG	2
IDXC/Visalia — W6VG	2
Roster Changes	3
Treasurer's Report	
—KG6AM	3
The Luck of the Draw	
—WA6LKM	3
In Retrospect	
—WA6AUD	4
The Bright Side of the Force—N16T	6
Mystery Photo —K6ILM	8
PG&E Noise Sniffer	
Licensed —N16T	8
ARRL DX Contest	
Results —WX6M	9
Coming Events	9
Kudos	9
Review: "DXpeditioning Basics" —N16T	10
W6KG-ARRL Fund	10
Visalia Photos —N16T	11

The Editor's Keyboard

Remembering Nose

By now, almost everyone in the NCDXC has learned that Katashi Nose, KH6IJ, is a Silent Key. An Honorary member of our club, and arguably the best-known ham in Hawaii, Nose succumbed to a second stroke at age 70, 15 years after being disabled by the first one.

A letter from his wife Matsuyo chronicles many of Nose's achievements, including his being the first ham in Hawaii to earn WAS, DXCC and WAZ, and his receiving Extra class license number 5.

Many of us remember Nose another way—for "older" members, he seems to have been almost everyone's first KH6.

He certainly was mine! I write while viewing his card for our QSO in 1958, when I was a New York teenager. The card—from his station in Lihue, Kauai and referring to Mt. Waialeale—says "Wettest Spot in the World—640 Inches a Year." When I visited Kauai for the first time—and flew over Waialeale in a helicopter—I thought of Nose. And when he came to Visalia a few years ago, confined to his wheelchair, I joined the line of well-wishers who made a point of greeting this giant among DXers.

73, Nose de NCDXC.



Visalia & Dayton—a Perspective

Well, they're over for another year, and it's a good thing, too! Sitting here nursing the cold that I fought off for three weeks—and which finally has had its way with me, it seems that if there was *another* big convention to attend, I might not have survived. It's a tough life being a DXer, but someone's gotta do it.

Visalia was fun, as always, with many visiting overseas DXers to talk to and slide shows to see. On Saturday night, I was seated at the same table as Iris, W6QL, while the M.C. (Dave, W6AQ) was listing the accomplishments of the DXer who was about to receive the SCDXC "Spirit of DX" Award. It quickly became apparent that the

continued on page 8

East Bay Meeting Reminder

The May meeting of the NCDXC will be held Friday, May 13 at the Blue Dolphin, 30 San Leandro Marina, in San Leandro. A map and a form were included in the April *DXer*.

The speaker will be Phil Kane of the FCC, discussing rules/regs, encroachments and CB/commercial interference on the amateur bands. Attitude adjustment commences at 6 PM, with dinner at 7. Be sure to reserve your place with Craig, N6ITW, by May 10.

Note that it is *not* necessary to have dinner to attend the meeting!

N O R T H E R N
C A L I F O R N I A
D X C L U B

Club Officers:

President: George Allan, WA6O
 Vice President: Craig Smith, N6ITW
 Secretary: Ron Panton, W6VG
 Treasurer: Dewey Churchill, KG6AM
 Director: Bob Arigo, KN6J
 Director: Jim Knochenhauer, K6ITL
 Director: Louese Bloom, KA6ING

DXer:

Editor: Garry Shapiro, N16T
 20941 Nez Perce Trail
 Los Gatos, CA 95030
 (or via DXPSN)

Printing, Mailing: Ron Panton, W6VG

DX Ladder: Larry Bloom, KD6XY
 2520 Heather Lane
 San Bruno, CA 94066
 (or via DXPSN)

Roster Manager: Garry Shapiro, N16T

Club Repeater, W6TUR, (147.36+)

Trustee: Bob Vallio, W6RGG
 Comm. Chairman: Ralph Hunt, AG6Q
 Club simplex: 147.54 (suggested)
 Thurs. Net QTR: 8 p.m. local time.
 Net Manager: Ralph Hunt, AG6Q
 DX News: Dave Pugatch, K16WF
 Propagation: Al Lotze, W6RQ
 Contest Manager: Rich Hudgins, WX6M
 Westlink: Craig Smith, N6ITW
 Swap Shop: Ben Deovlet, W6FDU
 933 Robin Lane
 Campbell, CA, 95008
 (408) 374-0372

QSL Information: Mac McHenry, W6BSY

W6TI DX Bulletins:

W6TI Station Trustee Bob Vallio, W6RGG, transmits DX information at 2:00 zulu every Monday (Sunday evening local time) on both 7.016 and 14.002 MHz.

Club address: Box 608
 Menlo Park, CA
 94026-0608

The DXer is published Monthly by the Northern California DX Club and sent to all club members.

Unless otherwise noted, NCDXC permits re-use of any article in this publication—provided *The DXer* and the article's author are credited.

Board of Directors Meeting

The Board met at the home of W6VG on April 27, 1994. Present were: George Allan, WA6O; Jim Knochenhauer, K6ITL; Louese Bloom, KA6ING; Dewey Churchill Jr., KG6AM; Ron Panton, W6VG. Meeting opened at 7:30 PM.

- Dates for Visalia, 1995 were discussed: April 21, 22, 23.
- The program for the May NCDXC meeting at the Blue Dolphin is still not firm. It is hoped that the FCC will provide a speaker.
- KG6AM submitted his treasurer's report for March, which was approved. K6ITL submitted his comprehensive summary of 1992-1993 Operating Funds. All items were examined in depth by the Board.
- The Board will meet on June 1 to finalize the budget, to provide the new officers with a reference point re club finances. The Board will also compose "target guidelines" for the *DXer* editor for the first time (*Procedures Manual*, p26).

Meeting adjourned at 9:27 PM.

—Ron Panton, W6VG

International DX Convention/Visalia

The 45th annual International DX Convention was presented by the Southern California and San Diego DX Clubs. Festivities commenced with the golf tournament and the Friday evening cocktail hour. DXpedition slide shows, product displays and various forums were available throughout the weekend. On Saturday, US Tower hosted its very popular and well-attended barbeque at its Visalia headquarters.

641 hams and friends attended the Saturday night banquet at the Visalia Holiday Inn. Dave Bell, W6AQ was the master of ceremonies. Special prizes were awarded to Southern California and San Diego DX club members. The SCDXC awarded Iris Colvin, W6QL, a well-deserved "Spirit of DXing" Award. It was announced that Lloyd Colvin, W6KG, had generously bequeathed \$150,000 to the ARRL as the "Colvin Award." It was also announced that the FCC has given the Don Wallace call—W6AM—to the Palos Verdes Radio Club.

After the NCDXC club officers were introduced, Knock, K6ITL, announced Ted Algren, KA6W as the NCDXC "DXer of the Year". Unfortunately, Ted was not in attendance, but received a well-deserved round of applause. Congratulations, Ted!

The banquet presentation was the Peter I Island DXpedition slide show. The speaker—W6MKB—was one of the DXpedition operators. The slides and commentary were excellent.

The pre-registration drawing prize, an ICOM IC-707, was won by N6GHG. Our own Mike Gavin, WB6KJE won a life subscription to World Radio Magazine. Rich Carbine, WB6UDS won the \$1000 discount on an ETO amplifier, and Rubin Hughes, WA6AHF won a pair of Svetlana 4CX800A tubes with sockets. Niki Caldwell, VE7NKI—daughter of Louese and Larry Bloom—won the tubular tower. B.C. is a long way to haul that tower, but it looks great! The Henry 2K amplifier was won by W6OUL, and Mike, NA6J, walked off with the Grand Prize—a Yaesu FT-1000D.

Following Sunday morning breakfast, the San Diego DX Club presented the finals of "DX Jeopardy." The three finalists were W6EJJ, W6CF, and NØAFW. This entertaining DX test was outstanding and the winner, Jay, W6EJJ earned his victory. Mike, NA6J, then stunned the crowd by winning the Kenwood TS-950SDX, in addition to the FT-1000D he had won the night before!

This was, in my opinion, a very well-run convention, and the Holiday Inn did a fine job for us DXers.

—Ron Panton, W6VG

Roster Changes

Change of Address

Robert R. (Bob) Artigo, KN6J
3127 Bodie Rd
Gardnerville, NV 89410
(H) not yet provided
(B) (702) 266-4000

Bob becomes an Absentee Member.

Gerald (Jerry) Bliss, K6SMH
17900 Los Alamos Drive
Saratoga, CA 95070
No phone number provided

Edward (Ed) Schuller, WA6CTA
1220 Waterview Dr
Mill Valley, CA 94941
(H) (415) 383-5334
(W) (415) 445-8312

Change of Telephone

Ken Anderson, K6PU
(W) (415) 852-7179

Glenn Vinson, W6OTC
(W) (415) 434-3333

John Hardin, WA6LKM
(H) (209) 239-3392
W) (209) 526-0755

Add FAX numbers

Garry Shapiro, NI6T
(F) (408) 353-1119

George Badger, W6TC
(F) (415) 233-0439

Treasurer's Report

Bank of America Checking Account

Beginning Balance		\$3,919.62
Receipts Dues received & deposited		
Account interest	\$3.46	
QSL card sales	50.00	
Unsold March dinners/auction	20.00	
Insurance rebate (Prop 103)	11.88	
Cash recvd at door, March mtg	288.00	
Subtotal	\$373.34	\$4,292.96

Payouts		
Cash to Bold Knight, Mar. mtg.	\$288.00	
Check to Bold Knight, Mar. mtg.	270.25	
DXer printing & mailing, Mar.	258.27	
DXer postage, Mar. & future	233.75	
DXer expenses, NI6T	62.35	
Marathon award expenses, WX6M	77.22	
Treasurer's expenses, KG6AM	8.85	
Calligraphy, Calif Awards	88.00	
ARRL Contest award plaques	188.76	
*Check to Eurekabank Savings (remaining IDXC seed money)	500.00	
Subtotal	\$1,975.45	

Ending Balance **\$2,317.51**

Eurekabank Savings Account

Beginning Balance		\$18,161.73
Account interest	\$32.69	
*Check from B of A Account	500.00	
Subtotal	\$532.69	

Ending Balance **\$18,694.42**

Repeater Fund

Balance per AG6Q (6 Apr) \$1,612.18

The Luck of the Draw...

Editor:

Each year I attend the DX Convention. I meet old friends and, with luck, make new ones, and see people I probably wouldn't see otherwise.

I've been a club member since 1984, and—due to the distance from my home to the meeting places, I don't attend as many of the meetings as I would like. I've never voiced my opinion until now.

This year, as with the previous 13 Visalia conventions that I have attended, I had a wonderful time. But—as I pulled out of the Holiday Inn and onto the highway toward home—I turned the 2m radio to 146.940. I heard someone ask "Who won the Grand Prize?" An individual—a member of this club—said "the same idiot that won the FT-1000 last night." Before I could respond, he added "I wonder who he's sleeping with!"

Mike, NA6J, has been a friend of mine since we first met at one of these conventions several years ago. Mike has won numerous prizes at past conventions, and each year I kid him about what he's going to win this year.

I don't know if anyone noticed the look of embarrassment on Mike's face when he stood up to claim the Grand Prize on Sunday after just having won the first Grand Prize the night before. I'm sure Mike comes to the convention with the same thoughts as the rest of us: "Boy, wouldn't it be great to win one of those radios?" So Mike goes out and buys a bunch of tickets just like the rest of us, and—lo and behold—he wins the two biggest prizes.

Personally, I would have loved to have won either of those prizes—or anything else—but we all know how the game works, and if we can't handle the outcome of the prize drawings, maybe we shouldn't play the game.

One last thought: several people won multiple prizes. Mike just happened to win the best of them. Congratulations, Mike!

—John Hardin, WA6LKM

In Retrospect...

Hugh Cassidy, WA6AUD

Professor Cass takes a long look back at the NCDXC...and is less than ecstatic about where it now is.

A few years back, say twenty-five or so, I held offices in the Northern California DX Club and club Secretary was one of them. It was a time for young ideas and perhaps I had them then. I even had the idea that because the ARRL did not really understand DXing back then, that some liaison between DX Clubs might be helpful. I set out to locate other clubs of the Deserving. The effort did not get far. I could find but five other clubs that could be considered as DX-oriented or close to it: the Potomac Valley, Frankford, West Gulf, Long Island and Southern California DX Clubs. I am sure that there might have been others, later I heard of a Florida DX club but that was about the extent of things.

In short, DXing was still an esoteric art. It was then, though things were changing. It was the time when "Emergency Preparedness" and "Traffic" were the main arenas of activity promoted by the ARRL. DXing was a sideshow. A sideshow that at times was difficult to understand.

Things have changed; they always do. Another idea that came flashing across an uncluttered mind was that the Northern California DX Club was tending to become more and more parochial in its attention span. While it was obvious that DXing was changing, little was changing within the NCDXC. Things were as they had always been: steeped in tradition. "We have always done things this way," was the reply given when any change was proposed. Back in those days, the offices of Secretary and Treasurer were combined. Trying to get and keep things in order during a meeting was always a test of dexterity; when dues were due, it was an impossible exercise in juggling.

Only good jugglers needed to apply for the position in those days! One had to follow the meeting, read the correspondence, read new member applications, write the meeting notes, take in dues payments and write receipts, all simultaneously or as close to that as possible.

The by-laws in those days stipulated that any change in the By-Laws and Constitution required a plurality of 75% of club member. Not 75% of those returning a mail ballot but 75% of the total membership! This was not changed until a concerted effort was made first to educate the membership and then make the proposal to change to "75% of the votes cast" to revise the by-laws. The winning argument

For many members, The DXer is the only contact they have with the club: that and little else. One can even make the argument that for this largesse, the distant but still somewhere-in-Northern-California member is paying \$2.00 per copy for the publication. This because it is hard to see how anyone living at a distance gets anything else from membership.

was that the club had never had 75% of members voting in any recorded balloting let alone a 75% plurality. In short, as it stood then, if every vote was "aye," it still was not possible to get enough votes to pass a change in the by-laws! Historically, in no mail or other type of balloting was there ever 75% of the membership casting a vote. However, it was tradition and—as it had worked so well up to then—the argument was made against any need to change it.

Another proposal argued that the Northern California DX Club, which claimed the DX Franchise in all the wide lands from north of the Tehachapi Range to the Oregon border, was hardly such a far-flung operation and actually was little more than an inflated local club. And it *thought* like a local club. The idea was floated that consideration might be given to a set-up such as the Sierra Club had then. This consisted of a central body for any needed coordinating or planning purposes but with affiliation of all the local DX Clubs throughout the franchised area. In short, many clubs marching together in step on the DXing field of honor. This was proposed in the hope that

as the local bodies could more conveniently meet, representatives to a central body could meet on occasion to try studying DX and its current needs, or to do those things which benefited all of the Northern California DXers. In short, a number of separate but equal clubs, all under the same umbrella. And all of them members of the same Northern California DX Club but in local chapters.

Perhaps it might have sounded better to call these local units "chapels," but in fact the tentative suggestion never had a prayer.

This was a time when membership in the NCDXC was strictly confined only to those holding a U.S. W6-license and who lived within the boundaries of the franchise. A query on the possibility of subscribing to the club newsletter would be brusquely rejected: the newsletter was "for members only!" It was treated as the sacred scroll of DXing, to be known only to the deserving W6ers living north of the Tehachapi. All others were to be heard gnashing their keys in the outer darkness...forever.

In those days the DXCC Honor Roll was so short that they used to publish it in every edition of QST. Things have changed in DXing over the ensuing years. At times it has to be wondered if the winds of change have blown over the NCDXC without ruffling any corporate feathers. In these latter enlightened days, can the NCDXC say that it is a regional DX Club, or—as many tend to think—a Santa Clara Valley Club which will accept and tolerate members from elsewhere but whose thrust is mainly for and toward those living at the lower end of the San Francisco Bay.

continued on next page

from previous page

In Shakespeare's *Julius Caesar*, Mark Antony opened his funeral oration with the words "Friends, Romans, Countrymen!" For years I heard those words as an orator's opening flourish. It was not until my more-matured years that I realized that Antony was addressing the three classes of Roman citizens! "Friends" were the patrician class; "Romans" were the other inhabitants of Rome itself; the last and lowest were the "Countrymen," the plebeians who dwelled outside of Rome and at the bottom of the citizenship ladder.

In short, is the DX Club as things were in Rome back then, with two classes of membership—those who live in the Santa Clara Valley and those who live elsewhere? As members of the DX club all pay the same membership tax, do they in turn all receive equal treatment before and by the Board? I think not! I will cite a minute from the March *DXer*. In that issue it was noted that a questionnaire on the operation of "Charlie" would be distributed at the March meeting. It is there to be noted: a decision on the club repeater would be guided by a handful of members in the Santa Clara Valley. This in spite of a mail poll held some years back on the need to expand the coverage of the repeater so it would reach all members—even those outside the Santa Clara Valley.

The question has to be asked whether the "rump" questionnaire at the March meeting was intended to supersede the mail ballot—still to be implemented—of some years back. It should not supersede and it would be interesting to hear from anyone who thinks it should.

The club has a publication called "The Bylaws & Procedures Manual." Who gets this treasure? Mainly the members in the Santa Clara Valley who live close to the meeting spot. If one is willing to spend a half-day or more in travel, he receives what he should be automatically entitled to receive; otherwise he does not.

Over the quarter-century or more since I held office there has come into being what was anticipated in those long-gone years. In Northern California—north of

the Tehachapis—there are now a number of DX clubs, each independently operating, each one ready to take over the local territory franchise, if they have not done it already. Some of these club members even have been heard to voice the heresy of saying that they can do very well without the NCDXC, even questioning what they might get, glory or otherwise, for the \$24 contribution that mainly benefits DXers in the Santa Clara Valley.

I really believe that the club has failed to widen its perspectives as it has grown and this narrow focus has endured for too many years.

Some may think this a good question; others will summarily reject it. Distance from the DX Club's meeting spots may be a factor in one's judgement.

The club now has something over 400 full members.* Attendance at the meetings usually does not reach 20% of the full membership listed in the club roster. Those who for one reason or another cannot attend—distance, time, and advanced years can be significant factors—gain most of their knowledge of the club's activities through *The DXer*. Yet, in a recent issue there was mention of a point raised at a recent board meeting as to whether the cost of the publication was excessive. Possible steps to reduce the monthly cost were discussed. For many members, *The DXer* is the *only* contact they have with the club: that and little else. One can even make the argument that for this largesse the distant—but still somewhere in Northern California—member is paying \$2.00 per copy for the publication. This because it is hard to see how anyone living at a distance gets anything else from membership. If time can be taken to consider the matter from the viewpoint of a club member in Siskiyou County, would you say he is getting his money's worth? His equal money's worth?

* The current roster shows 333 Full (Regular, Family and Life), 25 Absentee and 11 Honorary members—NI6T

In other years and other places I was also the President of the "Amateur Radio News Service." This is a national body of editors of amateur radio club bulletins. Along the way I beat the drum for the always strongly-held belief that the club bulletin is the most important factor in the operation of a radio club. It was often propounded that while a good radio club will always be noted in those units which have an outstanding club bulletin, those miserable and faltering clubs can likewise be noted because of their poor communications with their own membership—specifically, their communications via their club bulletin.

I also once was President of the NCDXC. During that time I would go out of my way to give the editor of *The DXer* everything he wanted and would ask for. I think it was a prudent policy and in later years I would often state that a good club bulletin editor was worth far more to a club than a good club president. I have never changed my mind in this area.

I do not think that the NCDXC is in dire financial straits. I do think that service and communications with the full membership and not just a small minority will in the long run greatly enhance the growth and stature of the NCDXC. I also think that in simple truth the club hierarchy does not own those bank accounts: they belong to the members. They should be used for the benefit of all the members and not for but a few.

I will go not much further. I really believe that the club has failed to widen its perspectives as it has grown and this narrow focus has endured for too many years. Because things were done in a closely prescribed way in other years does not necessarily mean they will be either fruitful nor successful in the present or future years. In short, DXers and DXing have changed over the years. Has the NCDXC really changed at all during these years of change? I do not think it has moved very far in any direction—if it has moved at all.



DXer Interview

The Bright Side of the Force

A Conversation With Force 12's Tom Schiller. Part 1 of 2

Tom Schiller, N6BT, is well-known as a DXer, contester and antenna guru who recently founded *Force 12 Systems* in Santa Clara. He and *The DXer's* NI6T had lunch in February.

I am interested in your evolution as an antenna designer. When did you seriously start playing with this stuff?

In 1983, Gary, WA6VEF and I went to Saipan to do the CQ/WW as a multi-multi. We planned to set up on the south end of the island using some quads belonging to Forrest Broadcasting. A few days before the contest, we were told the broadcast site on the north side of the island was not going to be used and would we like to use it? The place is called Marvey Cliff; it is 400' high and had three TC1611 curtains, 8-18 MHz, fed with open wire; 240' towers, 61 dipoles with passive reflectors. 21 dB gain, but I don't know if it was dBd or dBi. We also put up a tribander at 30'.

We hooked up the first curtain on 15m late at night and tuned the band and found HZ1AB running Euro-

...I finally came to the conclusion that 2 dB was a lot! In a situation like a contest—over a week-end—if you weren't within 2 dB of your competition it wasn't even close!

peans. I signed my call once. He yelled into the mike "Hold it! What was that call?" so I gave my callsign again and he says "Do you realize you just walked all over a Euro pileup and my antenna is aimed at Europe?" And I humbly said OK and he turned his antenna around and I went from 50 over to pegging his S-meter and he asked what antenna I was using and I told him. Now, these antennas cost about \$300K apiece and he said "Well, you can't run that in the contest" and I said "Sure I can, why not?" and he uttered a string of profanity and said "That's not allowable." I said "Sure it is, and not only that, we will have the amplifiers on. About that time a guy from Guam came up with an SB220 and a TH6 at 70 ft and he was an S7 at HZ; when I switched to the tribander I was an S7 also.

So I started thinking to myself, when we got done with all this, that that was the only time in my life I would have liked to have had a tape recorder. I listened on the band with the tribander—and it was quiet, and you turn on the curtain—it was a whole another world! Gary and I just looked at each other and said "Wow!"

A typical Minnesota overstatement...

After the contest there was a Soapbox piece from this German and he said "AHØC was *always* twenty over nine." There were guys in Japan who waited over an hour after the contest to talk to us who told us their meters were pegged the whole weekend, whatever the band, when we were using the curtains...We used them

on almost all the bands. I put up slopers on 80 and 160.

Anyway, I thought "How can this be?" Here we have this tribander and it has to be doing *something*—call it a 15 dB difference, but in the real world it was three times that, even if the S-meters were off by a factor of two! There had to be something else going on here and it was obviously non-linear. So I tested a lot of antennas over the years, and I finally came to the conclusion that 2 dB was a *lot!* In a situation like a contest—over a week-end—if you weren't within 2 dB of your competition it wasn't even *close!*

So then the question is: "Why is 2 dB so much?" If you are looking at a yagi, you are not talking big numbers. I tested a lot of trap antennas and regular antennas, and always found that there were these non-linear relationships. In other words, you get a trapped antenna, the manufacturer says it's got 8 dB; then I put up



N6BT at play, Visalia '94

a monobander—there's no comparison. So I kept asking the proverbial "Why is that?"

Back in '88, I did all the antennas for P40V, using all Cushcraft parts, but rebuilt them all on 20, 15 and 10. Tremendous difference in performance...I picked up about a db-and-a-half on average, per band. Of course, I got very frustrated with everybody's hardware over the years, especially with elements that wouldn't line up and so on, and the classic "Where do you want to set this—high phone, low phone, CW?" And of course, nobody wanted to do that, you wanted to cover it all, so you guessed, right? This is kinda bogus!

In '84 or '86 —I guess it was—when W2PV first published his formulas, I started doing it, using a calculator, and Dean Straw and some other guys actually put it into software. His first step was called "Active Yagi" or something. I used

continued on next page

continued from previous page

Dean's stuff for quite a while, and found that the tapering algorithms were all wrong... 'cause every time we built an antenna it peaked above the band. So I finally figured out what the offsets were. Then Brian (Beezley) started working with MN; his offsets were all wrong, too, so I used to maintain a big chart: this is where Dean is, this is where Brian is. One year, I built ten antennas for Dean according to his numbers and I tested them and fed it back to him; then he kept adjusting his tapering algorithms and I think he ended up showing that stuff to Brian. It's very critical on the tapering: makes a huge difference in antennas.

I just kept progressing... in '91 I sort of semi-retired, looking for something else to do... I started building more antennas and doing towers.

A lot of that was modifying commercial antennas?

Yeah, I took everyone else's parts... I rebuilt at least a half-dozen KLM 5-element 20's into single-element drivers, and every guy, to a person, said "I can't believe the difference." Huge difference. *So you took off the dual drivers?... What did you ascribe the difference to?*

Good question. My theory is ...the catch on using a model—especially on a phased array—is that you assume you can actually get that phase shift. If you don't, you don't get what the machine says. My guess is, because of the mushiness of the pattern on the 5/20, it's not getting anywhere near the gain the numbers show.

Did you ever talk to Mike Staal about it?

No. By then, he had left KLM for M²... Anyway, I finally said "let's do this..."

That incident in '83—that dramatic difference—really was the impetus... I was talking to George Badger, W6TC, at a convention recently and he said "Once you have been behind the big antenna, it really recalibrates your perspective." ...My first antenna was a Windom at about 20 feet and I thought it was terrific because I could work somebody. Then I went to a 2-element trapped antenna, and that was light-years better than the Windom.

It's kind of like the blind man and the elephant, isn't it?

Yes. One of the best things anybody can do is to try to use a very good antenna.

It's maybe one of the worst things you can do, also...

At least it will move your expectations and clear your head about a lot of misconceptions... Someone will call up and say "hey, this manufacturer claims 8-9 dB, how does yours compare?" and I have to tell him that I honestly don't know what that number means. I just walk through the steps. Like Cushcraft claims 8 or 9 dB for their A4. Let's assume it's not including ground gain—which will add up to 6 dB. So now we're up to 14-15 dB. That's not possible. Our big six-on-twenty—the 6 element on a 44-foot boom—has 13.5 dB and the A4 is not going to have more gain than that big twenty has. So now if we assume that that 8-9 dB includes ground gain, and we take off six, that leaves 2 to 3 dB. That's probably a good number, and I am probably one of the few guys who has ever tested tribanders side-by-side with a dipole. Where the misconception comes in—even on the test range—is that you end up not testing the main lobe of the antenna...

It's really simple: if you have a classic HF antenna range—two 100-foot towers separated 1000 feet—and this is my dipole and receiver and this is my antenna-under-test, where is the main lobe of the antenna going?

Above it.

Sure. The question is, what are you receiving? You are definitely *not* measuring the main lobe.

You're measuring maybe the bottom of the main lobe?

Doubtful, unless you're at a very high frequency. In '86 or '87, I set up a vertical test range—meaning I had a vertical track—and I tested mostly at 2m and I had down a copper screen so I had a very good ground. The antennas were horizontally polarized but I ran the receive antenna on

this 40-foot vertical track so it passed through the lobes up to about 60°. Most of the lobes were where they should be, but I discovered the stuff published on stacks was in error. The books said that if you had one array at a half-wavelength and another at a wavelength, it was equivalent to having one at 3/4 wavelength; that's not so. The new software will tell you that 90% of it is the top antenna, and that's what I found also.

Also, if you have an antenna that is fairly low—a wavelength or less above ground—and you test a dipole and then a 3-element—when you pass through the main lobe, you will get 5.5 dB difference between the two, which is reasonable. This "7 dB" stuff is for the birds! Let's use 5.5—which is sometimes a little extreme, unless it is pretty carefully tuned.

If, on the other hand, you make a measurement down at 5°, you'll get up to 9 dB difference, and the difference there is caused by a phenomenon of *lobe compression*, where—because you have gain—the energy is compressed into the lowest lobe—the nose actually lowers and gets fatter—so now you are actually pushing energy out where you didn't have any before with the dipole, and

that's where you can get erroneous readings. Or if you have a dipole on a tower, and replace it with a beam, you are

not measuring through the main lobe. *So there is that gain differential, but you are not measuring it at the nose (in the range situation)? Dave Barton was touching on that in his series on verticals versus low horizontals near the sea, where he was talking about gain at the angles that matter...*

The moral is: if you can't get your antenna high, make it big, because it is a non-linear improvement... Some of the software today will show you that.

That would suggest that on 80 meters, for example, the advantage of a phased array

One of the best things anybody can do is to try to use a very good antenna... At least it will move your expectations and clear your head about a lot of misconceptions.

continued on page 9

Mystery Photo



This YL is shown operating her beautiful antique SX-28 from J2AHL. Shortly after, she commenced operation with her home call of W4KE. Several years ago, she gave many club members a new CW country from an African location. Some hams used to refer to her as "Department of Defense."

Who is she?

—Answer on page 11

PG&E Noise Sniffer Gets License

Wally Hanifin of PG&E, whose skill in locating noise sources has relieved the suffering of many a Santa Clara Valley DXer, has taken the plunge! The Cupertino Division's rolling ambassador breezed through his Tech-Lite exam and now sports KE6FYW. What's more, he is studying the code!

Many will remember Wally's presentation on noise at an NCDXC monthly meeting, at which he was presented with a plaque in appreciation of his service to noise-plagued DXers.

With no ham gear, he has yet to make his first QSO, but will be looking around for a VHF mobile rig to install in the Blue Van. Congratulations, Wally! Now let's get you upgraded and on HF!

—N16T

from page 1

Visalia & Dayton—a Perspective

recipient would be Iris—apparent to everyone *but* Iris, that is. I turned to her and said "Well, Iris, have you figured it out yet?" She gave me a puzzled look and said "Lee Shaklee?"

Our own Knock, K6ITL, then rose to do his Mr. Magoo impression and to present the NCDXC DXer of the Year award to Ted Algren, KA6W, who—at that very moment—was camped out in Yosemite with his YF. Nice timing, Ted!

The 3YØPI slide presentation was well done, with all basking in the glow of having worked them every which way. The raffle tickets were all sold by Saturday morning(!), but I had not gotten there soon enough to get any. From the looks of the drawing results—one guy (NA6J) won *both* of the top prizes—a handful of people must have bought *all* 9600 tickets (see the letter to *The DXer* on the subject). Having no tix, I was spared the

disappointment of not winning, and left the hall early to go party with the NCCC.

On Sunday morning, San Diego DX Club presented "DX Jeopardy" to complement the traditional Visalia breakfast of grease and cholesterol. (It's not hard to see why DXers generally do *not* look like olympic champions.) Vince, K5VT then presented his E31A DXpedition, followed by the final drawing and a re-enactment of Exodus.

Dayton is, of course, a different horse: one would swear every ham in the world was there, and I saw ticket numbers beyond 40,000. Certainly, there is no place in the world with more geeks with rubber duckies on top of their heads, or funny hats with call letters.

I never really got to see the famous Flea Market in its full glory. The weather was so lousy that 2/3 of the outdoor vendors packed up and left on Saturday, while small rivers coursed through the parking

lot. The vendor with the biggest smile was the one selling tents and tarps.

The DX dinner featured the 3YØPI show again, but this time the whole Peter I crew was present (including Martin the cook), and was there afterwards in the suites to sell and sign KK6EK's book. The book, by the way, is excellent, and all the more astounding for having been published within two months of the DXpedition's return.

Of course, the very best part for any DXer is schmoozing with other DXers. Of that there was plenty, and I even got to tell NW6P's A61AD story (*DXer*, Feb. '94) to Don, WB2DND—A61AD's friend and QSL manager.

This was my first Hamvention pilgrimage. Next time, I won't leave the rain gear in the motel room, and will probably skip the Grand Banquet in favor of the Contest Dinner or Chinese takeout, but—overall—it was an overwhelming experience, and one not to be missed.

—N16T al Haj

1994 ARRL DX Contest Results

The ARRL 1994 DX Contests were a big success for NCDXC. We had 20 entries on SSB and 17 entries on CW for a total score of 7,869,929. These are tabulated below.

SSB			CW		
Call	Category	Score	Call	Category	Score
WC6H	S/OP	1,701,216	AA6MC	S/OP	331,890
W6REC	M/S	1,451,520	N6HR	S/OP	186,120
KI6CG	S/OP	556,800	NI6T	S/OP-A	144,261
N6CCL	S/OP-A	486,243	N6TV	S/OP	139,887
KA6BIM	S/OP	469,665	W6BIP	S/OP	139,464
W6BIP	S/OP-A	260,580	AD6E	S/OP	129,090
NI6T	S/OP-A	202,404	W6REC	S/OP	128,139
W6BSY	15M	201,372	N6IP	S/OP	104,904
K6ITL	S/OP	115,404	KA6BIM	S/OP	104,118
N6AN	S/OP	110,889	K6RQ	S/OP	93,372
N6JM	S/OP-LP	91,524	W6BSY	15M	76,782
W6VG	S/OP	85,902	K6FO	S/OP	63,600
K6FO	S/OP	84,942	N6JM	S/OP-LP	61,275
K6RQ	S/OP	52,605	W6WB	S/OP	54,435
K6MA	S/OP	44,880	W6ISQ	S/OP	39,039
N6IP	S/OP-A	44,220	N6AN	S/OP	18,432
WX6M	S/OP	34,020	K6MA	S/OP	3,600
W6ISQ	S/OP?	26,085			
KG6AM	S/OP	25,440			
KA6ING	10M	5,610			

17 entries = 1,818,408

20 entries = 6,051,321

Don't forget to join in the fun and participate in the 1994 Northern California DX Club Marathon, June 1 through August 31.

73 and Good Luck

—Rich, WX6M

Coming Events

- Livermore Swap Meet, 1st Sunday each month, Las Positas College, Livermore, 7 AM-noon
- Foothill Flea Market, 2nd Saturday, each month, Foothill College, Los Altos, from 7 AM
- CQ-M Contest, May 13-14
- Volta RTTY DX Contest, May 13-14
- CQ WW WPX CW Contest, May 28-29
- Portugal Day Contest, SSB, June 6
- ANARTS W/W RTTY Contest, June 11-12
- All-Asian DX Contest, CW, June 18-19
- ARRL Field Day, June 25-26

Kudos

The Dixer congratulates the following NCDXC members for their recent noteworthy achievements.

- **Jack Troster, W6ISQ:** appointed Pacific Division representative to the ARRL DX Advisory Committee, replacing Jim Maxwell, W6CF.
- **Ted Algren, KA6W:** named 1994 NCDXC "DXer of the Year" at Visalia '94; slated to accept the award at the May meeting.
- **Iris Colvin, W6QL:** received the SCDXC "Spirit of DX" award at Visalia '94.

from page 7

N6BT Interview

would be much greater than just the apparent gain improvement...

That's correct, because you are getting energy now where you didn't have any before...by pushing it down. That is particularly important at lower frequencies where your antenna is less than a wavelength high...it's not a proportional performance increase.

So that explains why 2 dB is a lot?

It's one of the things. The other thing has to do—in my opinion—with the other receiver's AGC. If you're 2 dB above someone else on the same frequency, you will tend to be heard and the other guy will not, particularly on phone. Also—I have seen no research in this area—I am sure 2 dB will get you another layer of signals. It may not be too important if you are just working loud guys and casual stuff, but if you are trying to work weak ones, you will hear stations the other guy won't hear, because it is a signal-to-noise issue.

Most top DXers today say that a fraction of a dB is to die for, once you have reached a certain point...

I would "preach"—so to speak—that if you want to be ahead of your competition, improve your entire system so that for your competition to be 3 dB above you is such an escalation that it probably cannot be done.

For me, the first thing would be to move...

I have done a few other comparisons between monobanders and trapped antennas on the same site, over time. Bill, K6KM, had a TH7 on a separate 70-foot tower, and he has two other towers—a 70 and a 50 or 55-foot. On the 70-footer he has a 5-element 20 and a 3-element 40, and on the other tower he has a couple of our dual-banders, and a little dinky 3-element 20 on an 18-foot boom. He finally sold the TH7: it averaged 10 dB less than the 5-element 20 and 8 dB under the 3-element 20. I didn't believe it until I went up there. All he had to do was turn a switch and you could hear the difference: it reminded me of being on Saipan. He

continued next page

The DXer Book Review

DXpeditioning Basics by Wayne Mills, N7NG

Reviewed by Garry Shapiro, N16T

Longtime NCDXCer N7NG's callsign is well known to those DXers who eagerly pursue DXpeditions. He has been a CW top-gun with such efforts as Jarvis I., Conway Reef, Penguin I., Albania and Spratly. As Chuck Hutchinson, K8CH aptly states in a preface to *DXpeditioning Basics*—Wayne Mills' new book: "Wayne understands both sides of a pileup...he is one of the best!"

Well and truly spoken, but in this book—jointly published by ARRL and INDEXA—N7NG eschews "counseling the masses" and focuses on the other side of the pileup. From his perspective, the cross-section of DXers is too varied in competence—and too anarchistic—to effectively address as a group. Hence, *DXpeditioning Basics* is an operating handbook for DXpeditioners and wannabe DXpeditioners: a compendium of techniques and methods to gain and maintain pileup control and to achieve the DXpedition's overall goals.

The necessity for such a handbook should be obvious, for not every amateur venturing to rare and desirable places possesses skills commensurate with the undertaking. Recall, for example, the Laccadives operation of early 1993, and the howling chaos triggered by the

inexperience of the two operators. The other side of the pileup is indeed a different world!

This is not to infer that there is little here for the average DXer or "local QRPer"—in Hugh Cassidy's parlance—trying to work a DXpedition. Knowledge is power, and understanding what the guy on that glacier or coral reef is trying to do will inevitably improve one's odds of success.

Wayne's chapter headings showcase his thoughtful and methodical approach. These include Objectives, Organization, Who to Work, Pileup Management, QSO Mechanics, Frustration Management, Problems, and Follow-up (which includes QSL policy). Some of the chapter headings provide more detail and insight than others. Under "Problems," one finds discussions of Dupes, Portables, Questions

and Jammers—all of which are potentially disruptive to the smooth flow of QSO's into the expedition log. Other topics could benefit from additional discussion: there was—for example—a mere two-paragraph discussion of "Ethics," which too-quickly opined that ethical issues will be decided by the DXing community.

A jaded honor-roller might sniff that many of the points Wayne makes are commonsensical. Common sense is, however, a most uncommon virtue in DXing!

DXpeditioning Basics is published simply: spiral-bound, it has a light, plain soft-cover and costs only \$5.00 postpaid from INDEXA (PO Box 607, Rock Hill, SC 29731). It is clearly intended to be used—to lie flat and handy on the operating table, ready to absorb stains from spilled coffee.



from page 9

The Bright Side of The Force

tracked it over a half-year; I don't think he ever found them to be equal.

Down in Aruba, they put up monobanders—5 elements on 10 and 15 and 4 elements on 20 and kept up the old tri-banders. Working back into the States, it was an S-unit difference. This was at P43GR's place. On 10m, he said he worked stuff he didn't know he could hear...

Same thing at HC8A. Rich (N6KT) did an analysis that he presented to NCCC. They set 4 world records there, using the antennas I redesigned for 20, 15 and 10. If you look at the gross numbers, it does not appear to be that big a difference (in the antennas)—you just don't have that much to work with—but it's the difference between doing okay and *really* doing okay.

This other guy has a KT34XA and he bought a (Force 12) 5B(and)A(rray) and says "Gee, the 20m elements only use 14.5

feet of the boom," and I said "Yeah, but it gets more gain than is apparent there" and he says "It's not anywhere near my XA" and I say "Trust me: it's a *lot* better on 20." On 10m, the XA is better, and 15 is probably a wash.

Why is the XA better on 10?

Remember that it has traps, and the radiating portion on 10 is inside those...no trap loss.

K6RMM had up an XA, and replaced it with our six...if you take out the ground-reflection gain, the six has 7.5 dB, and I had him track for months with other guys. He swapped antennas, and he picked up 8 dB. It's so dramatic: where he used to be behind one of his friends, now he is ahead of him by the amount he used to be behind him...

Part 2 of the N6BT interview will appear in the June issue of The DXer.

W6KG-ARRL Fund Endowed

When Lloyd Colvin, W6KG, died last December, the League became the beneficiary of the proceeds of a life insurance policy on Mr. Colvin. The proceeds, more than \$150,000, will now fund an endowment, the income from which will be used to further the strengthening of international friendship through DXing.

ARRL Executive Vice President David Sumner, K1ZZ, said "During his lifetime, W6KG made great personal contributions to international friendship through Amateur Radio in his visits to more than 150 countries with his wife Iris Colvin, W6QL. Through the Colvin Award, the League will proudly continue those contributions."

Announcement of the Colvin Fund was made at the International DX Convention in Visalia, California, on April 16.

—From The ARRL Letter, April 26, '94

Visalia!



from page 8

Mystery Photo

The photo was taken in the early 1950's and shows DX legend and NCDXC member Iris Colvin, W6QL, ex-W6DOD.



Iris poses above with the *Spirit of DX* Award she received at Visalia.

—Elliott Pisor, K6ILM