FOMRHI Quarterly

BULLETIN 38
Bulletin Supplement
Book News
Plans: Bate Collection
Membership List Supplement
Index: 1934

COMMUNICATIONS

578-584 REVIEWS: The New Grove Dictionary of Musical Instruments, ed. S. Sadie;
Patents for Inventions...Musical Instruments, 1694-1886, repr. T. Bingham;

585 List of Northern French makers
586 Re: scraping plane in Comm 571
587 Materials and tone quality
588 A contribution to authenticity in the art of drum making
589 Did nothing survive from Roman antiquity?
590 Some Nietzschean aphorisms to stir up trouble
591 Some historical data on harpsichords
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593 The pitch of Ruckers instruments
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FELLOWSHIP OF MAKERS AND RESEARCHERS OF HISTORICAL INSTRUMENTS
Hon. Sec. J. Montagu, c/o Faculty of Music, St. Aldate's, Oxford OX1 1DB, U.K.
I'm a bit late wishing you a happy new year; I've been setting up a couple of Special Exhibitions here, which has run me into the second week of January. However, I have a fairly clear conscience — the majority of you haven't got round to renewing your subscription yet, so presumably you're not too worried.

Please note that I have followed Eph's implied request to mend my ways and leave a 1" (25mm near enough) margin all round — this should be noted, please, by those who send material to cut and paste for the Bulletin.

AVAILABLE QUARTERLIES: Maggie tells me that stocks of some of the earlier ones are running down. From now on, prospective members will only get the contents of past Qs back to 1980 because there are only odd copies of 1978 and 1979 left. If any of you want them, on January 1st there were available:

Q 12, July, 1978: 4 copies
Q 13, October, 1978: 14 copies
Q 14, January, 1979: no copies
Q 15, April, 1979: no copies
Q 16, July, 1979: 3 copies
Q 17, October, 1979: 2 copies, and there may be less of any of these now. If you want them, write to her with £1 for each one by surface, £1.25 by air. Stocks of later Qs are reasonably OK at the moment; 25 plus some odd ones for the year 1980, 10 for the year 1981 (but 24+ for all Qs except 23 which we must have had a run on or fewer copies of).

PLANS: Ken Williams went back home not long after I wrote the last Bulletin, so there are only two new Bate plans you've not heard about, the Potter 6-key flute with corps de rechange and the Rottenburgh tenor oboe. There are reduced copies of the drawings herewith, and also of the Delusse oboe which was near enough completion to be listed last time but not finished in time to have its drawing included. In case there should be any misapprehension, what you see here, and have seen in past Qs, is just the drawing; there is also, with each one, a sheet of bore measurements. The chances of our finding someone else to draw such superb plans are negligible (any volunteers would be very welcome!), and so to make things more convenient for you, you will find a complete list of Bate Plans in this Q.

I hope that you will allow me here to express my gratitude to Ken for what he has done. He came over here and spent the whole summer drawing these plans and measuring the instruments. He had a grant from the Australia Council (to whom we are also very grateful), but that only covered about half his costs. Not only has he benefited the Bate Collection very considerably (because what you pay for these plans goes into our purchase fund; we don't get any funds from the University for purchases), but he has benefited all woodwind makers, who now have these excellent plans available to them. One reason that I keep the prices so low is that this also benefits the makers — higher profits would help the Collection, but lower prices help the community, and I reckon that dissemination of information is part of our job.

BATE COLLECTION ACCESSIONS: A couple of new instruments that you might like to know about: A Boehm system flute by E. Albert of
Brussels, with extension to low B flat (we have other flutes to low B, quite a common extension though rare in England, and some pre-Boehm instruments with extension to low A, but nothing else to B flat); this was given to us by bequest by Winston T. Ely, who visited the Bate Collection about 18 months ago and liked it so much that he left us this very rare flute.

The other is a 4-key bassoon by August Grenser, the first of the Grenser dynasty, dated 1776. This was bought for us by the National Art-Collections Fund, and came from a collection in Holland. We have been very fortunate....

WARNING: If you are ever asked by Noel Sheehan of Sheehan's Music Services in Leicester to lend an instrument, DON'T. He borrowed one of ours (one of mine, actually, on loan to the Bate, a 5-key Milhouse flute). Instead of bringing it back personally, he put it into the post, into the Christmas rush, not even insured, just recorded delivery. It took over a fortnight to get here, and when it arrived it was like ice. Very fortunately, and no thanks to Mr. Sheehan, it did get here and it thawed out without damage, but it does make me wonder whether some of the advice I received from people like Eph and Cary when I started this job might not be justified. We do lend, we do allow our instruments to be played, but behaviour like this makes one wonder.

FURTHER TO: Bull.37, p.4, David Crookes writes:

In answer to Bob Marvin (bull. 37, p. 4) I can only say, in the words of I Cor. 14. iv, δ λάλον γλώσσα, κακόν οίκεύατο, Like the apostle, he writes 'difficilia intellectu', and it's not my fault if I 看不明白.

Further to my request (Bull.37, p.5) for Hirschtalg, Uta Henri­ning sent me a couple of sticks, for which I was grateful, and Paul Hailperin said he could get me any quantity if anyone was likely to be travelling between us. He went on:

I use Hirschtalg also on string winding of tenons, and it's wonderful for that too. I just bought a spool of thread, 1 kilo for DM 10.00 which seems dirt cheap for those who regularly use a certain amount. It's from the Hanfusion in Schopfheim, which translates to hemp. The woman at the desk called it linen, but I'm not sure if that might not be a loose generic term for everything she was trying to sell. I'm enclosing a sample. I used to rub my string over a block of beeswax, but that takes time when you get into more than an occasional tenon. Some put a spool of thread in a vat of molten beeswax, but that's tricky. Now I have a beeswax-terpentine balsam mixture, actually to finish woodworking, but I noticed that I could smear it onto the outside of this big spool of thread and when it has dried, I have quite a length of thread which is impregnated enough for use.

His asterisk is to a note of the postcode for Schopfheim: D-7580. The sample he sent looks to me like hemp, though it's fairly coarse and very uneven in thickness. You should be careful about ordering it; the Customs get rather strpy about hemp products because some of them can be used for other purposes (can you smoke hemp thread?), and certainly hemp rope has been unobtainable here for a number of years now for precisely this reason. If you want to chance it, DM 10 for a kilo is very cheap; I'm selling 2 oz spools of linen thread for £2, and that is a great deal more expensive.
Comm.543: Robert Cronin writes:

I'm afraid Paul Hailpcrin misinterprets my use of the questions in my Comm. 533, "Does the hammered bell sound like an oboe da caccia?" and "Does the spun bell sound like an oboe da caccia?" The suggested answer, "No, it [the spun bell] sounds like a shawm, saxophone, whatever..." is clearly and intentionally absurd. If one were to assign a probability that someone would give the answer above to the second question, it would have to be vanishingly small, just as small as the probability that you will hear a concert goer say, "Too bad about the oboe da caccia, it has that mediocre, spun-bell sound."

The object of science is not to "obscure the senses" but to attempt to explain, and, yes, to quantify what we hear and "feel". Mr. Hailperin fears a future in which artists will no longer dare to report what they hear. He has nothing to fear providing what he hears is real. If it is real, it can be measured and confirmed, maybe it can even be explained by acoustic theory, and we will have increased our knowledge of musical instruments. What is wrong with that?

Comm.548: Cary Karp writes:

The material presented in Comm 548 ignores an important point which I had raised in an earlier discussion of the subject. The first few sentences of the final paragraph of the Comm should be changed to read: "It is unlikely that any technique for case hardening iron music wire was in use. Although the needle makers of that time were treating iron wire in this manner, the high temperature to which it is exposed in this process would offset the gain in tensile strength effected by cold drawing. Increases in tensile strength of 45% have been reported as a result of case hardening low-carbon steel rods, although this stock had not previously been cold worked. Since there is no need...

There is a good deal of source material relating to the early history of the Altena wire drawing industry. Further work with this may lead to an increased understanding of the development of wire strung instruments.

In that connexion, Cary has sent me a copy of the SMS-Musikmuseet Technical Report no.1 on The Pitches of 18th century Strung Keyboard Instruments, which has a lot of relevant information in it (see either Book News or a Review herewith for further information, depending on how time goes), and Rémy Gug has sent me Musique Ancienne no. 18 (sept, 1984) with a very long article of his on wire drawing, asking if we'd like a shorter version of it in English, which I've told him I'm sure we would - I've sent it on to Eph for his opinion.

Comm.563a: David Crookes again:

Further to Eph Segermann's space filler, point 1, the word authentic (which has been imported from existential philosophy — notably Heidegger's Sein und Zeit) cannot possibly bear the construction antiquarian that we presently give it. Let's stick to historical. It's amazing how words become fashionable and then lose their meaning altogether.

David has sent a Comm. on similar lines which he fears may be too libellous to print; I think it's OK, and if Eph agrees with me, you'll find it further on

Comm.568: A number of members have agreed with me, eg Carl Willets: "My sentiments entirely". It occurs to me only as I type this that perhaps one reason that we have had fewer than usual renewals by this time of January is that other members don't but are too polite to say so; we'll see if they come back!
Comm. 566 (out of numerical order because it's a longer comment)

Edward Tarr sent the following:

Mr. Gretton invites my opinion on the difference of opinion between himself and Mr. Overton.

I too received invitations to review Mr. Overton's book on the cornett, but declined. I thought that if I were asked to write an extensive review, much of it negative, readers might construe prejudice, since I was involved with a similar, larger publication concerning the same instrument. Suffice it to say that readers carefully going through only the catalogue part of our Basel "Zink-Buch" will discover sufficient points of difference between Overton and myself to realize what my opinion must be.

Furthermore, I could not agree more with the carefully researched reviews of Mr. Gretton, both in respect to Mr. Overton's work and the Basel "Zink-Buch". Mr. Overton's wounded and emotional reply, calling up all kinds of "authorities" for supposed support, brings to mind the French proverb: "Qui s'excuse, s'accuse".

Incidentally, I had heard that the Basel "Zink-Buch" to which Ed refers was a much better study, but the publishers ignored our request for a review copy; either they don't think that FoMRHI is important enough to carry a review of it, or they are not willing to risk one. Personally, I'm always a bit suspicious of publishers who seem reluctant to risk a review.

KEEP FoMRHIQ AS IT IS: Several more of you have said this in notes on your renewal forms. I have to confess that things are still in limbo because I've been too busy to get a Fellows' Circular out. We do have to discuss the whole editorial policy and whether we should go formal or not. Of those of you who have written in, 100% are for keep it as it is, and this of course will have its weight. Arthur Marshall put the consensus very fully: "As a member without expertise and therefore little to contribute, I look forward to receiving each Q, and find the current format quite satisfactory. I should much prefer to keep the informal exchange of views and practical workshop details as the main objective whatever 'image' this produces - rather than moving as a number of periodicals have done - to advance so far that amateurs on which much of the continued support for early musical activity depends lose interest. The membership list with its regular updating is very useful for retaining contact with friends with whom personal meeting is infrequent."

REQUESTS & QUERIES: John Underhill asks if anyone has or knows of drawings or measurements of Rottenburgh flutes. David Sandall asks whether anyone knows where he can get hold of a drawing of a double virginals. I have suggested that he try Edinburgh, the Metropolitan Museum New York and the Germanisches Nationalmuseum in Nürnberg (I knew those two because I had photos in my Med & Ren, plates 98 & 97 respectively) and thought that it might be worth trying the Brussels Conservatoire and the Antwerp Vleeshuis. If anyone has more positive information or other suggestions, please write to him.
David Crookes has two requests: Does anyone know the address of a Chinese manufacturer of school violins? He's tried the Chinese embassy but has had no reply. And can anyone produce a supplier of mother of pearl? There used to be a firm called Friedlein out in Ilford who did ivory and shell; does anyone know if they're still around? Now that I'm out of London I've lost touch with those sort of suppliers.

George Bowden has a query about Varnish. One or more of our recipes that we've had has mentioned "best pale drying oil" and nobody in Majorca knows what is meant by this. Can anyone explain, please? He asks whether it could be linseed oil, and if so whether it would be boiled? But linseed does not strike me as "pale". Copy of answers to me, too, please in case other people are wondering.

He asks also whether anyone knows of a book, Die Form der Geige by Hans Kayser, published by Occident Verlag in Zurich in 1947. It looks useful to him, but it's in German which he doesn't read. He asks whether anyone would be interested to translate it (there are only 35 pages); he would be willing to make some contribution towards the cost. Anyway, I've sent it on to Eph with this because it's in his line, so any volunteers to Eph, please. If anyone is in Majorca and wants to get in touch with George, please note that his phone number has changed.

Roland Delassus, the director of the Institut des Musiques Traditionelles et d'Art Campanaire, Hôtel Scrive, 1 Rue du Lombard, 59800 Lille, France, is enquiring about instruments made by makers from northern France, especially Dunkirk and that area. He has sent a list of makers they have so far discovered to come from that region (copies available from him), and they are now trying to trace instruments. Anyone who can help him, please write to the above address. I will send Eph the list of makers and he can decide whether to put it in or not.

COURSES: Too late to remind you of the Bate Collection Clarinet Weekend on February 2nd & 3rd, I suspect.

The next one will be in November, again 2nd and 3rd, on Recorders, mainly for makers led by Alec Loretto. It will give makers the chance to compare their instruments with others (we are still discussing what we are going to do, but a recent suggestion of Alec's is a sort of blind testing; getting a good player to play all different instruments behind a screen and see who likes what, and so on), as well as showing all the relevant techniques and so on.

The 1985 Course Catalogue has arrived from Huismuziek with an enormous list of courses for players and makers. Most of the makers' courses are one-day, but if you're interested, either come here and have a look at the list, or write to them (in the List of Members under Bouwerskontakt) for a copy.

Also just arrived (while I've been typing this) is the course list from West Dean College; mostly playing, but one makers' course covering a lot of instruments, including most strings and renaissance woodwind, from 4th to 13th April. They're in the List of Members too.

The Yuval Music Association are holding the 3rd Annual Workshop for Early Music in Jerusalem from April 7th to 16th, only for singers and players of recorder, traverso, gamba, lute, baroque
violin, cello and guitar, and continuo. I've got plenty of their leaflets if anyone is interested; I seem to be on at least three of the mailing lists they've used.

CONFERENCES: University of Reading are running a day conference on The Woods of Musical Instruments on Saturday 2nd March, with a number of speakers you'll know of (eg Terence Pamplin and Peter Mactaggart) and others. Should be quite interesting; if you want more information, write to Miss C.M.Olver, Room G13, School of Education, University of Reading, London Road, Reading RG1 5AQ.

The course runs from 9.30 on the Saturday morning, and Donald S. Gill, who lives in Reading (in List of Members) says that he has two spare bedrooms and would be happy to put anyone up whom it would help.

He also says (and I apologise for forgetting it for FURTHER TO:)

Further to Andy Willoughby's excellent article on reamers (Comm 567) those members who are not model engineers may, as Andy mentions, find difficulties in obtaining small amounts of mild steel. Send a large s.a.e. to K.R. Whiston, New Mills, Stockport SK12 4PT and ask for his latest catalogue. He supplies mild steel (and other materials as well including brass sheet) in any quantity but specialises in small orders. Always look in the 'Odd Sections' part of the catalogue first as material there is about half the regular price. In the current catalogue there is some 35mm x 6mm flat steel stock at 80p per 330mm. When ordering widths don't forget Andy's advice about cutting the reamer from the centre of the stock. If you cut a piece of 35mm straight stock in two lengthways you will finish up with two pieces of 17mm curved stock.

Another COURSE just in: International lute course with master classes by Paul O'Dette and Anthony Bailes, 9-17 March in Holland. Write to: De Nederlandse Luitvereniging, Watertje 18, 1621 GP Hoorn, Holland.

OTHER SOCIETIES: Our Australian opposite number, the Australian Association of Musical Instrument Makers, have sent me copies of their Journal, looking much like our Q, though covering modern as well as early instruments. They take advertisements, which is a difference. If anyone wants to see them, they're here. I hope that all our Australian members belong to them, too.

There is a new Toronto Early Music Centre starting up, with workshops, concerts, lectures, and one day a Newsletter. The subscription is a bit higher than ours ($15 for individuals) but if you're interested, write to them at 70 Jackman Ave, Toronto, Ontario M4K 2X5. The president is Susan Prior.

SALES AID?: There is a new organisation called the Bandwagon which says that it is going to send leaflets to "the whole musical world" (this was in October and I've not had one yet) in which people can list whatever they have for sale at a cost of £5 for the first item and £3.50 per item thereafter; they will also send print-outs of what they have for sale to interested buyers they say. If you want to go into it further, the address is POBox 222, Cheltenham, Glos. GL50 1SB, tel. 0242-517517.

EXHIBITION: I've been deluged with leaflets for the French version of the Horticultural Hall, at the Grand Palais, Champs
Elysées, Paris, 5th-10th March. Costs are fairly high; a non-equipped booth at least 40 sq metres costs 650 FF per square metre; a fully equipped booth costs 800 FF, a maximum of 5 square metres in a shared booth costs 300 FF per sq.m, and on top there is a subscription fee of 1000 FF. The one thing that they don't say is what is the final date for applications, and they would have been a lot more efficient if they had told us about it in time for the last Q; at this stage it's probably too late anyway. If you want to try, the address to write to is: Musicora, Assisté de Soditec, 62 rue de Miromesnil, 75008 Paris.

DEHUMIDIFIERS: I had a flier this morning from a firm called Condensation Control Ltd (20/24 Uxbridge Street, London W8 7TA) who are interested in getting into the musical instrument makers market. They produce a small machine at £350 (including VAT) which looks neater than the one we have in the Bate (but its tank is internal, which means that it will have to be emptied much more often than my big external one). They enclosed a letter of recommendation from Malcolm Prior, and offer to give me any information I want. I'll find out more about it for next time, but you have the basic information now.

LIST OF MEMBERS: The usual Supplement in this Q has all the additions to your interests that you have sent Maggie and me while renewing in the Organological Index. You will, I hope, agree that it's not worth putting in a main entry for you for that, but it does mean that the subtractions from your interests won't be known till the next full list in April.

I owe apologies to Paolo Barattini and the Bath College of Further Education; both joined before the last Q, but they slipped through the gap between the Treasurers; Margaret had them safely and passed them on to Maggie, but neither passed them to me (I imagine that Maggie assumed Margaret had, and Margaret probably thought that Maggie would or else forgot that she herself hadn't). Anyway, they're in now and my apologies that they were not in the last Supplement.

Now is your opportunity to send any further amendments which must reach me before the deadline below, to get into the next main List. A number of you have moved, but have not included telephone numbers (if you want them in). The British are a curiously secretive lot — everyone else includes their postal codes when they give us their address, but most of half of the UK members seem to think that they are secret information for them alone. Let us have them, please; it does help the post office (and they are so inefficient that they need all the help they can get).

AN EXTRA from John Weston:

THINGS THAT MIGHT HAVE BEEN BETTER PUT

I have just had to restring a child's violin. I followed the advice of the girl in the shop (steel strings not being part of our orthodoxy) and bought what seems to be quite a good string but which has the following remarkable blurb on the envelope ... It has been possible to achieve both the swiftness of the sound and the softness, to feel that, one can recall the bowel strings of the past, but this type far better than the latter owing to the promptness in emission ...

FURTHER TO A REVIEW HEREWITH: I've talked to Eph about the Grove Instrument Dictionary. He will do a review of the usual sort in the next Q. I will try to produce by then the first of a series
of nit-picking reviews, of the sort that I used to do a few years back, and Eph will do the same, and he will also call on others of you for more. The Dictionary is important enough that we should get as much comment on it as possible, however long it takes. Thos of you who have access to copies, or who buy copies, are invited to join in the fun. Any comments that you may have, any corrections, however minor, will all be useful to your colleagues, and also to Grove themselves, to whom they will, of course (there's a Freudian slip for you; it was meant to be 'of course'), be passed on.

LIST OF MEMBERS: I meant to say on the previous page, that I've tried, this time, to keep to Eph's desired margin. It won't work for the main list; if we had an inch all round, the list would be 50% longer, with half of you going on to a third line, which would make the whole thing too expensive. So it'll have to be the usual narrow margins.

DEADLINE FOR NEXT Q: Friday 29th March. I am hoping to get a holiday in that vacation (I didn't have one in the summer, nor in the one just past), and if I don't get the Bull done right at the beginning of April, it won't be done till I get back three weeks later. So let's hope I'll get it done quick.

I think that's the lot.

Jeremy Montagu
Hon. Sec. FoMRHI

FoMRHI Book News

William McBride is planning a series of books on Instruments and Their Makers. The first, which is due out early this year, is on The Buffet Crampon Collection, a survey of the saxophones and other woodwind preserved in their factory from 1850 to the present day. He invites subscriptions at 300 FF (plus p&p) for a book of about 320pp, 370 figs, 40 tables with 35 double-page tables of details on the instruments. Address is: Prestige Books, BP 82, F-92146 Clamart cedex, France, or I have forms here if you prefer.

FoMRHI Music News

Kings Music GMC (36 Tudor Road, Godmanchester, Huntingdon, Cambs PE18 8DP, UK) is producing a series of Chamber Music from Georgian England. The first series is Trio Sonatas, and they are reproduced from contemporary prints in facsimile. Works include Abel op.3, Arne op.3, Avison op.1, Boyce, Kelly and Sammartini. Prices vary (Abel, Avison and Kelly £7.50 each with extra bass, since originally harpsichord and cello shared a copy, at 75p.) but postage is included. If you want the lot, there was a reduced price till the end of 1984 of £55 instead of £69 (or £50 instead of £75 if you want the extra bass part for each). As you've only just heard of it, you might like to try it on —why else did they tell us about it? The editors are Clifford Bartlett and Peter Holman, and Peter will be reading this, too, so he whether the discount still applies.
David van Edwards writes concerning Comm 565: "I find Ebony very satisfactory as a bow wood, lots of people prefer it to Pernambuco. Greenhart is also good but a bit light, I suspect that the sample for the density given in the Comm or my piece is atypical (I bet the Timberline stuff is wet and mine is 20 years old). African Blackwood is possible but seems not to be stiff enough. I must try some of the others."

Rod Jenkins himself writes: "A friend has asked me to make him a violin modelled after a Stainer. On looking through the past Q's I have been unable to locate any Stainer drawing. Jeremy’s World of Baroque and Classical Musical Instruments has a photo of a Stainer (No. 5176) from the Musikinstrumenten Museum Berlin and there is a rather undistinguished violin in the Hill collection in the Ashmolean, but no drawing of it in the Hill list. Baines' European and American Musical Instruments has an illustration of a very interesting Stainer violin in original condition, with an acknowledgement to W E Hill & Sons. Does anyone know where I may obtain a plan or measured drawing of a Stainer violin?"

In Comm 557, Thomas Munch's observations are the same as ours. Thinning a viol's belly affects overall acoustic response much more than the type of tone. He then suggests that the tone characteristic could perhaps be associated with the shape of the resonance chamber (and, I presume, the resonant soundboard). While this is undoubtedly very important, he has neglected a factor which is at least of equal importance: the distribution of curvature in the arching of the belly. Variation in local curvature can affect local stiffness more readily than variation in thickness.

Bridge design has a strong effect on tone quality. The various modes of bridge resonance can enhance very high notes and the upper partials of lower notes by transmitting more of the string's vibration energy to the soundboard. Bridge tuning by carving away bits in a standard bridge design is practiced by many makers. We work on the flexibility across the centre (by opening the centre hole and the side cut-outs towards the centre hole), and the flexibility of the feet (by whittling away on the bottom curve at the tops of the feet, opposite the side cut-outs). If one goes too far the sound becomes unbalanced and unstable on some notes. One then starts with a new bridge blank. Incidentally, I have no confidence that the bridge on the festooned Ashmolean Rose viol is early because I've never seen a bridge illustration from c.1600 with the thin toes that modern bridges have.

My responses to Crighton's 559 are too long for the Bull Supp and so are presented in Comms 595, 596, and 597.

As for Crookes's Comm 562, I hope that my response in Bull Supp 37 to his Comm 546 satisfied him with respect to 'cello spikes. Concerning retuning while playing, I'm sure that Flesch's instructions were for when a broken string has just been replaced and is still stretching rapidly. Generally, each piece or movement in early music is short enough and the pitch stability of gut good enough so that retuning in the middle of such a piece or movement is unnecessary. A serious problem is that modern performers sense that their audiences are less tolerant of tuning in public generally than they were when gut strings were the norm. Retuning while playing would help here as well as with freshly replaced strings. As for me "to retract", I don't know what Crookes has in mind, but would be glad to do so long as I don't have to change anything that I've said. Concerning Crookes's last point, my Comm 563 should be relevant.

The space-filler comments I inserted after Comm 563 were supposed to be controversial. I find all of them objectionable. Instead of inciting argument, they induced a pile more in Comm 590 which D. Z. is presumably itching to defend. Maybe those of you who are not the argumentative sort could just vote: true or false, meaningful or silly, or whatever.
Concerning Comm 565 by Rod Jenkins, we have tested several woods as bow materials and found that creep (i.e., how easily the sample took a set) was the factor that put us off most of them. (We have mostly made clip-in type bows that most people don't clip out, so this might not be such an important factor to other bow makers.) There was remarkable variability from sample to sample of the same wood. We found that Beefwood was particularly satisfactory. The Timberline Catalogue lists it as Minusops Huberi with a density of 980. As for its early use, the stick and nut of an 18th century bow found in Northumbria is claimed to be of this material in GSJ XIV (1961) p 47. Incidentally, Trichet (1640) mentioned brazilwood (which includes pernambuco) and ebony as bow woods.

There are several extended articles or short books which look interesting but are quite mysterious to those of us who are deficient in language skills. Jeremy's Bulletin above (p 4) mentions an article by Gug (72 pages) in Musique Ancienne (Sept 1984) on his latest researches on the methods of the Nuremberg wire drawers. I'll send the article to anyone who thinks he might try a summary. Before we publish it, we'll ask Gug to check it out. You might remember, not so long ago, how an author got rather upset about an "unauthorized" translation. Same with the little Keyers book (Jeremy's Bulletin, p 6), on geometry of violin design (28 pages). I'll add a little book entitled "Der Cremoneser Lack" by Erich Knopf published by Verlag Das Musikinstrument (Frankfurt am Main). This last book has 86 pages and has been received for review, which is probably what it should get. Here we can write anything we like without worrying about the author's feelings.

Rod Jenkins and his computer have come through again with their excellent service of providing us with an index, this time for 1984. But we should not expect computers to know things that are obvious to people. So at the head of the list we have "Accuracy-historical" and four lines down we have "Authenticity", with completely different Comms in each of these entries! This could be a serious problem if the index was to be used by computers, but luckily FoMRHI members are mostly people. Programming in a Thesaurus of key-word equivalences would make the index apt for computer use.
**RECORDERS:**

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<th>Cat.no.</th>
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<td>£ 4.00</td>
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1. **P.I. Bressan (Pierre Jaillard, the Bressan), TREBLE, boxwood & ivory, early 18th c., ex Edgar Hunt Coll.**  
   Aₜ=403 Hz  
   Measured & drawn by Frederick Morgan, 1 sheet  
   Measured & drawn by Friedrich von Huene, 4 sheets.

2. **Anonymous (Style of Bressan) BASS, maple & ivory, 1 silver key, early 18th c., ex Edgar Hunt Coll.**  
   Aₜ=394 Hz  
   Measured & drawn by Ken Williams, 4 sheets.

3. **Renaissance BASSET marked ⬇️ ⬆️, maple, 1 brass key, 16th c., ex Michael Morrow Coll.**  
   Aₜ=462 Hz  
   Measured & drawn by Tim Cranmore, 1 large sheet.

**TABOR PIPES:**

<table>
<thead>
<tr>
<th>Cat.no.</th>
<th>Price</th>
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<tbody>
<tr>
<td>£ 2.00</td>
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<td>£ 4.00</td>
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1. **Henry Potter (2 Bridge St), stained boxwood & ivory, x 01 c.1850, ex Galpin Coll., Lent A.C.Baines.**  
   In D at Aₜ=432 Hz.

2. **Rudall, Carte & Co Ltd, boxwood, mid-19th c, ex Overy Coll., Lent A.C.Baines.**  
   In D at 435 Hz.

3. **Rudall, Carte & Co Ltd, boxwood & ivory, 1 silver key, x 02 2nd half 18th c.**  
   Aₜ=427 Hz  
   Measured & drawn by Ken Williams, 2 sheets.

**TRAVERSIS:**

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<td>£ 2.00</td>
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1. **Charles Bizey, Paris, boxwood & ivory, 1 silver key, first half 18th c., Morley-Pegge Memorial Gift.**  
   Aₜ=397 Hz  
   Measured & drawn by Ken Williams, 2 sheets.

2. **Thomas Cahusac, London, boxwood & ivory, 1 silver key, 2nd half 18th c.**  
   Aₜ=427 Hz  
   Measured & drawn by Ken Williams, 2 sheets.

3. **Richard Potter, London, boxwood & ivory, 6 flat silver keys (C, C#, D#, cross F, G#, B), with 3 upper body joints (4, 5 & 6), dated 1782.**  
   Aₜ=418, 427 & 436 Hz  
   Measured & drawn by Ken Williams, 3 sheets.

4. **Proser, London, stained boxwood & ivory, 1 silver key, last quarter 18th c., ex Edgar Hunt Coll.**  
   Aₜ=427 Hz  
   Measured & drawn by Ken Williams, 2 sheets.

5. **Schuchart, London, stained boxwood & ivory, 1 silver key, mid-18th c., Lent A.C.Baines.**  
   Aₜ=420 Hz  
   Measured & drawn by Ken Williams, 2 sheets.

6. **Thomas Stanesby junior, London, ivory & silver, 1 silver key, c.1735, Lent Jeremy Montagu.**  
   Embouchure has been enlarged, etc; A now = c.437 Hz  
   Measured by Andreas Glatt, drawn by David Cox, with a trace by Rod Cameron on the back, 1 sheet.

7. **Thomas Stanesby junior, London, stained boxwood & ivory, 1 silver key, FLÛTE D'AMOUR, c.1720.**  
   In B♭ at Aₜ=415 Hz  
   Measured & drawn by Ken Williams, 2 sheets.
OBOES:

Measured by Mary Kirkpatrick; drawn by Ken Williams, 2 sheets
£ 2.00

Anonymous German transitional, stained boxwood, 3 brass keys, c.1760, ex Edgar Hunt Coll.
Measured by Mary Kirkpatrick & Gail Hennessy; drawn by Ken Williams, 2 sheets
£ 2.00

Charles Bizey, maple, 2 silver keys, 1st half 18th c., Morley-Pegge Memorial Gift. A=c.407 hz.
Measured & drawn by Ken Williams, 2 sheets
£ 2.00

Thomas Cahusac senior, stained boxwood & ivory, 2 silver keys, 2nd half 18th c., ex MacGillivray Coll.
Measured & drawn by Ken Williams, 2 sheets
£ 2.00

Christophe Delusse, Paris, cedar & silver, 3 brass keys (3rd key: F#), c.1795.
Measured & drawn by Ken Williams, 2 sheets
£ 2.00

Milhouse, Newark, stained boxwood, 2 brass keys, pre-1788, ex Edgar Hunt Coll.
Measured & drawn by Ken Williams, 2 sheets
£ 2.00

Jean-Hyacinth Rottenburgh, Brussels, stained boxwood & brass, 3 brass keys, TENOR OBOE, bulb bell, 1st half 18th c., ex Morley-Pegge Coll.
Measured & drawn by Ken Williams, 2 sheets
£ 2.00

Thomas Stanesby junior, maple & silver, 2 silver keys, 2nd quarter 18th c. A=c.421 hz.
Measured by Mary Kirkpatrick; drawn by Ken Williams, 2 sheets
£ 2.00

Anonymous, wooden OBOE MUTE, c.1800, Lent A.C.Baines. x 2012
Measured & drawn by Ken Williams, 1 sheet
£ 1.00

CLARINETs:

Dossier of measurements & drawings by Alan Mills
£ 3.00

Dossier of measurements & drawings by Alan Mills
£ 5.00

Dossier of measurements & drawings by Alan Mills
£ 3.00

Moussetter, Paris, in Bb, stained boxwood, 5 brass keys, c.1780.
Measured & drawn by Ken Williams, 2 sheets
£ 2.00

BASSOONS:

Thomas Cahusac senior, maple (wing joint stained boxwood) x 35 4 brass keys, dated 1769, ex Brailes Church, ex Langwill Coll., Lent Philip Bate. A=c.407 hz.
Measured & drawn by Ken Williams, 2 sheets
Full size £10.00
the drawing Half size £ 4.00
Bassoons continued

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<th>Cat.no.</th>
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<td><strong>6</strong></td>
<td><strong>£ 10.00</strong></td>
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<tr>
<td><strong>7</strong></td>
<td><strong>£ 4.00</strong></td>
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**CATALOGUE of the Bate Collection by Anthony Baines**
- **£ 2.50**
- **£ 0.20**
- **£ 0.20**

**MINIPLANS**, postcards of the drawing of each plan, reduced to eighth or sixteenth of the original size (half-size sample below)
- **£ 0.20**

The Plans by Ken Williams have been made with the aid of a grant from the Music Board of the Australia Council. Copies will be available in Australia initially from the Music Librarian, State Library of Victoria, and eventually from other centres by arrangement with the Music Board.

Orders from all other parts of the world should be addressed to:
- The Curator, Bate Collection of Historical Instruments, Faculty of Music, St. Aldate's, Oxford OX1 1DB.

Cheques should be made payable to The Bate Collection, Oxford, and must be in pounds sterling. Eurocheques cannot be accepted by the University, nor can cheques in other currencies, due to the excessive cost of clearing them. The University has no GIRO Account, but GIRO cheques seem to be acceptable.

The Miniplans are on light card, similar to postcards. The full-size plans are all on paper, almost all of them A3 size, and all but three are photocopies. The exceptions are the renaissance recorder (0117) and the full-size plans of the two bassoons, which are dyeline copies, also on paper. All drawings are full-size, except for the half-size options on the bassoons and one pictorial drawing of the Bressan treble recorder in the Von Huene set, which is slightly reduced to fit an A3 sheet.

Prices include postage (by surface abroad) folded flat to A4 size; if you require rolled, please send your own tube and add enough postage to cover its weight.

**HALF-SIZE SAMPLE OF A MINIPLAN**
TOP JOINT

MIDDLE JOINT

BELL

KEYBLOCKS (AA)

ADDITIONAL KEY FOR LOW B (1/4) ADDED LATER CLOSED IN. HOLE ON BELL NOW REMOVED.

MATERIAL: CEDAR, SILVER MOUNTS.

FOR MORE DIMENSIONS SEE DRAWING 204.

Christophe Deluxe OBOE
(c. 1785)

JOINT DETAILS

Measurerd & drawn Ken Willmott 5/10/86 (With grant assistance from The Music Board of The Antioch College)

This may well turn into the first of a series of reviews; I'll talk to Eph about that. If any of you see copies (or can afford to buy one — at least you won't have to take out a mortgage like you would for the full Grove) and want to pass on any comments to your colleagues, do please send them in. Nobody could possibly do a full review by themselves of a work of this nature.

Let's start with a few obvious points. First, it is not the same as picking all the instrument entries out of Grove 6 (I'm glad that they have decided on that as the reference title for the New Grove — otherwise we'd have wound up with, in 20 years or so, the Newer Grove, followed by the Newest and where next?). There are many new entries (innumerable on the non-European instruments) and pretty well all the major entries have been revised and up-dated, even with references to 1984 publications. In addition, a number of articles have been junked and totally rewritten. Second, is it worth £250? The answer, I think is yes. It's one hell of a price for a three-volume work, even today, but they are very big volumes with a lot of material in them representing a vast amount of work, all of which had to be paid for, and if they are reckoning, as they may well be, that it's going to take 10 years to sell it, in this commercial age, the price has to reflect the interest on their capital.

Is it worth that much to us? If you're only interested in one instrument, then no, of course not. But if you have a general interest in musical instruments, then again I have to say that I think it is. So far, I've read (and I mean read; the lot) almost all of the first volume and dipped here and there into the others. In about two cases I could think of someone better to have written the articles (apart from my own ones on Biblical instruments; there were good reasons why the far better person to have written those wasn't available) so that almost everywhere we have authoritative articles by the leading present expert. Many will be outdated before long, of course, as research progresses, but so far as the study of instruments goes in the second half of 1984 (it's as up-to-date as that, wholly unlike the parent publication, some of which was ten years out-of-date), this is the state of the art.

I have to write another review elsewhere, so I want to try to be careful not to repeat myself too much, and anyway I've still got a lot of reading to do. So far, there is nothing that I'd want to tear apart, like some things I've reviewed in the past. There are a few places where I've written 'no' in the margin, and fewer where I've written something ruder (eg the membrane of the eunuch flute does not "give out notes of its own"; the membrane buzzes but only in reaction to what's sung into it, and the pitch of the buzz is that of the voice singing, not that of the membrane; that's one of the places where I've written 'no'. A place where I've been ruder is the statement that "Praetorius called...the lowest (bass) recorder in F 'Bassett'"; the quickest glance at Praetorius shows that he had two sizes lower than bassett, and a moment's thought would suggest that Bassett is a diminutive of bass, as in fact the article says
at its beginning, and that therefore there's likely to be something bigger.

I've got a number of small niggles. I dislike the use of conch-shell as a term (I wouldn't like flauto-flute or Hautbois- oboe either) because conch means shell. I dislike the use of keys for the bars of a xylophone (they don't open anything, as keys of an organ, nor are they levers which transmit motion, as they are on the piano etc), and I dislike even more the use of the same word for the tongues, or more accurately reeds since they function as a form of free reed, of the so-called lamellophone (if you're going to call the thing a 'tongue-sounder', why not call what makes the sound tongues?). An even stronger dislike of mine is the use of stops to mean finger holes. We all know what stops are; they come on organs, and by extension, since they have a similar function, on harpsichords. They don't come on side-blown African horns (they do here, often, but not always), nor on woodwind of any area. The usage has an old- fashioned ring to it, like clarionet, for one thing, and it's wrong for another.

They're a bit haywire on classification, too. There's obviously confusion over what is a frame drum (the definition is that the depth of the shell does not exceed the radius of the head, a purely artificial definition, but all definitions are artificial by definition!) and also over what is a box zither (by definition the strings run across a soundboard which is supported by sides going down to a bottom board - ie a box with strings running across the upper surface; thus a clavichord is not a box zither but a frame zither since there is a wide space for the keys between hitchpins and wrestpins, nor is a modern piano a box zither because there's no bottom board. However, I am extremely glad that they have stuck throughout to the Hornbostel/Sachs Classification System; it keeps the whole thing logical and, with all its faults, it's by far the best system we've got (and I write as one who has tried to promote a rival system and who has had to admit that the old one is better).

Some of the photographs are a bit ropey; nice views of someone playing an instrument, but too often you see more of the someone than you do of the instrument. I wish that there had been space and money for far more photographs. Many of the non-European instruments are not precisely identifiable just from the text. Writing as a curator and a collector, it would be useful to know whether my Philippine jews harp is the Abafiw of the northern Philippines or something else from the centre or the south.

I have the impression (but then I'm really a wind man) that there is a higher proportion of entries for organ builders and violin makers than there is for wind makers; perhaps someone whose main interests were organs or violins would say the opposite, but I think I'm right in this.

So these are points against it. You'll note that they are all minor ones. The points for it are much more solid. There are entries here for every instrument you've ever heard of, and, unless your knowledge is much greater than mine, for a vast number that you have never heard of. They have gone through an incredible number of reference books digging up all the instrument names mentioned and listing them here with long or
or short according to their importance, and according to the amount of information available. There are copious cross-references from all the common or accepted names, and this is an aspect which I think of particular importance. Grove and its editors have obviously gone to considerable trouble to produce spellings and, in the case of other alphabets, accentuations which can be considered correct. I would like to suggest that these names, spellings and accentuations be taken as the standard forms when writing in English unless there are very good grounds indeed for choosing an alternative. Just as we (and Grove 6) have accepted Laurie Wright's citole and gittern as the standard and correct names, so I think that we should take the Grove names; if there is any doubt, we can always put an older term in parentheses, as indeed Grove do. This makes little difference in our instruments (there are a few points I've met so far, bassett, for instance where some of us have used basset and some bassett and some both here and there), but a lot for the non-European. It's not something that I'd usually say, but I suggest that even if we disagree with a Grove spelling that we should use it for the sake of uniformity and for the sake of ease of reference for our readers. This is something that I shall be saying elsewhere and, I suspect, often, because I think that it is important. Of course we may find less competent printers and find trouble with some of the accents, but I do think that we should try.

My inclination is to leave things as this for the moment. I intend to come back in future Qs with, as I have done with other books in the past, full lists of comments. For one thing, I want to finish reading it first; for another, I'm waiting for a few pages missing from the Flute entry (it suddenly turned into the article on Ornaments from the next volume).

I would conclude by saying that if you have any general interest in instruments, you should try to scrape up the money to buy a copy. The coverage is so wide that unless you have a library next door, it's going to be difficult to say 'I'll nip down and look it up in the library'. One thing you can't say is that you have all the relevant books and therefore you don't need it; the articles may be by the same people as the books (in many cases they are because these are the recognised experts), but what you've got here is all the updated material which you won't get in the books until they have all, if they are so lucky with their publishers as to get the opportunity, produced their new editions.

FOMRHI Comm. 579

Jeremy Montagu

Review of: Patents for Inventions: Abridgements of Specifications relating to Musical Instruments, 1694-1866. Reprinted by Tony Bingham, 11 Pond Street, London NW3 2PN, 1984. 520 pp. £17.00 in the shop; £19.00 by post (no free post any more; the GPO have put the cost up too high).

This is a facsimile reprint of the 1871 small format volume (8" x 5½") which covered all musical patents from the earliest in 1694 (rather a swizz; it's nothing very important, and the second patent is from 1730, which is quite important). As far
(patents continued)

as Early Music is concerned today, this volume covers the lot. I've had a copy for years (I was very lucky and bought Henry George Farmer's) and it's always bristling with slips of paper marking all the things I've needed to look up. It was followed by a second volume in the same format going up to 1876 (which I hope that Tony will produce next), and they then went on to the larger format with excerpts from the drawings. That's the only snag about these first two volumes, that there are no drawings, but nevertheless they are something that many of us need to refer to constantly, and which have been unavailable for many years. Tony has done us all a favour by reprinting it, and it should sell like hot cakes.

FoMRHI Comm. 580
Jeremy Montagu
Review of: Harmony For the Flute, Tony Bingham as above, £2.50 in the shop and £3.50 by post.

Most of you probably know Tony's pads of writing paper with pictures of instruments and musicians. This is the second set, again 48 sheets of A4 paper, eight different pictures each six times. This time every picture includes one or more flutes, but there are a lot of other instruments around as well. If you like writing paper with pictures on it (or if you want something unusual to advertise a concert on), then this is for you. The pads make good presents, too, for musical friends.

Not the sort of thing we usually review, perhaps, but nobody has sent me a musical calendar to review this year, so why not.

FoMRHI Comm. 581
Jeremy Montagu

A nice simple introduction, of necessity simple for this length. It can't compare with Baines (Bagpipes) for coverage, nor with Palmer (Hurdy-gurdies, but remember what I said in Comm.276 about that one), but then it's not meant to. There are brief, clear and, with three exceptions, accurate descriptions, and a lot of good photographs and line drawings. If you're interested in either type of instrument, it's worth having (and Peter says he'll put in an errata slip to cover the points mentioned, which are all due to printers' errors).

FoMRHI Comm. 582
Jeremy Montagu

I imagine that everyone interested in this subject knows Ian Woodfield's Royal Musical Association paper (PRMA 103, 1977) and is familiar with his conclusion, which I don't think anyone would now dispute, that the viol began in Valencia as a bowed version of the Aragonese vihuela. The evidence for this is presented
again here, amplified and in considerable detail. So far, so good, and indeed very important. What is built into the conclusion is the theory that the rabab was also ancestral to the viol, and this I, anyway, find less convincing. The rabab is the Moorish instrument (still used in Morocco, for instance) which appears in the Cántigas (eg f. 160, playing to the big lute, plate 20 in my Med & Ren and in many other books) which was always played a gamba with underhand bowing, and which was commonly used in Aragon into the late 15th century, the period under discussion. Agreed that the viol was also played in this way in this area, and agreed that such pictures as there are from this time and place showing fiddles played show them always played a braccio, nevertheless I have a suspicion that it is just as much the size and shape of the vihuela de arco that demands playing a gamba as the fact that players of bowed instruments there and then were more accustomed to the rabab than to the fiddle. Indeed, Woodfield shows a number of plates which do include fiddles played a braccio (and also rebecs - or are they rababes? - played a braccio) and thus proves that the fiddle was not unknown.

He is trying to show that it was the rabab rather than the fiddle that was the influence because Thurston Dart (his professor when his basic research on this was done) had opted for fiddle, which is fair enough (essential, from what I remember of Bob Dart, who was a strong believer in teaching by opposition). Nevertheless, it could just as well have been that the much longer neck of the vihuela than the fiddle made playing a braccio impossible (if you look at some of the plates, the player's arm simply would not be long enough to get out to first position if the instrument were held on the shoulder). Either the instrument would have to be cut down to fiddle string length, or it would have to be played a gamba. Certainly the pre-existence of the rabab tradition in the area must have helped the acceptance of this technique, but I am not convinced that it was necessarily ancestral to it.

Woodfield goes on to chart the introduction of the viol into Italy through the Borgia influence, as in the RMA paper, and then surveys its further dissemination through Europe, with useful compendia of tunings, repertoire and use from contemporary documents in the various countries, through into the 16th century and just into the 17th.

This is a thoroughly useful book; much information is brought together in the latter portions, which is always useful to future students. The initial portion is, of course, of great importance, the discussion of the actual origin, for Woodfield has proved what Dart had suggested, that the origin of the viol was the vihuela rather than the mediaeval fiddle, and for that reason alone this book is as important as Bachmann's book on The Origins of Bowing, and will remain a point of departure for all future studies on the viol.

One minor point: all the illustrations save one are good and clear, a refreshing feature in these days of murky plates (one shows a different instrument from what the caption says, but I've been caught in that trap, too; you can mark a photo as much as you like, but the printer can still take the wrong bit, and if you ever see proofs of your plates, you're unusually lucky).
Review of: Peter & Ann Mactaggart, Practical Gilding, Mac & Me, 19 Mill Lane, Welwyn, Herts AL6 9EU, 72 pp, illus. £5.95 incl. postage UK; £6.20 Europe; £6.95 USA & Canada; £7.10 Australia, New Zealand & Japan.

This is third of the Mactaggart's practical manuals that I've reviewed (see Comms 399 in Q 26 and 518 in Q 34) and I am beginning to find it difficult to find sufficient superlatives without repeating myself. We have all read all sorts of do-it-yourself manuals, whether for complex jobs like making a musical instrument or simple ones like wiring up an electric plug, and a fairly constant impression is that here is the expert talking to us poor twits and telling us just how to do the job. It's never like that with Peter and Ann. Yes, they know how to do the job alright, and they tell us very clearly (exceptionally clearly) how to do it. But all the way one has the very clear impression that when they are warning us not to do this, that or the other thing, it's because they've found out by hard experience what happens if you do. They know how to gild, but they're writing as practical gilders who have learned on the job, and if they tell us that one way is better than another, it's not because they are experts but because they have tried both. What's more, they make a tricky job sound easy, and I'd be willing to bet that if you read the book carefully, you would find it easy, or at least a lot easier than you'd expect.

They also list suppliers of all materials (and anything you might find it difficult to get, they tell you how to make). They don't, like so many of us, try to sell you their other books by saying that a certain process will be found there; anything that you would need to know about while gilding (for instance about varnishes), you'll find here. So if you knew about painting before they produced that book, anything in that which you'd need for this one (spacing of lettering is another one), you'll find here too.

One thing that they don't say is what gold leaf costs (I suspect because it varies with the value of gold from day to day), but they do also cover the cheaper substitutes, from silver and aluminium down to bronze, telling you the old tricks of how to make them look like gold. So don't be put off if you think that gold is beyond you; other things will glister, too, and they're here as well.


I reviewed the main Atlas in Comm. 362 in Q 24. This has a few corrections and a lot of new entries, especially for American makes. It gives the serial number for each year (sometimes for every few years), and if you need to be able to date pianos, it is a very useful book and a worthwhile Supplement. However, it does work mainly from the mid-19th century onwards.
Roland Delassus, the director of the Institut des Musiques Traditionnelles et d'Art Campanaire, Hôtel Scrive, 1 Rue du Lombard, 59800 Lille, France, is enquiring about instruments made by makers from northern France, especially Dunkirk and that area. He has sent a list of makers they have so far discovered to come from that region (copies available from him), and they are now trying to trace instruments. Anyone who can help him, please write to the above address.

LISTE DES LUTHIERS DU NORD ET DU PAS-DE-CALAIS
(dictionnaire universel des luthiers René Vannes)

* Anzin : Ledent Silvain (1812 - ......)
* Amiens : Lenay Thomas (1797 - 1868)
  Lenay Léon (...... - 1878)
  Lenay Édouard (...... - 1900)
* Arras : Boulan (XVIIIème)
  Carrel Antoine (1750 - 1790)
  Vaillant (1835 - ......)
* Boulogne : Luthier ou Lullier Charles (XIXème)
* Boulogne-sur-Mer : Thibaut Gabriel Eugène (1867 - 1908)
* Calais : Thibaut Hector (XIXème)
* Combray : Etienne Victor (1900 - ......)
* Courcelles : Chanot Georges II (1872 - 1885)
* Douai : Bis... (XVIIIème)
  Lullier ou Lullian Charles (1849 - ......)
* Dunkerque : Broquet François (1889 - ......)
  Le Blond Guillaume (1792 - 1799)
  Lebana Charles (XIXème)
  Plumerel (1864 - ......)
* Lille : Bazin René (1902 - ......)
  Couban (1761 - ......)
  De Lannoy B.J. (1760 - 1774)
  De Lannoy L. (1828 - 1835)
  Delplanche Girard J. ou
  Delplanche Gérard (1755 - 1790)
  Demou Marcel (1948 - ......)
  François (1850 - ......)
  Genovese A. (1885 - ......)
  Het Pierre Joseph (1865 - 1902)
  Het Pierre Jean Henri (1902 - 1937)
  Lapaix (1840 - 1856)
  Le Pot Charles (1726 - ......)
  Le Riche C.J. (1768 - 1781)
  Mariassal Auguste (1880 - 1908)
  Mariassal Olivier (1935 - 1946)
  Mariassal Albert (1946 - ......)
  Mangin Louis (1840 - ......)
  Mangin François (XIXème)
  Pouillet François (1865 - 1879)
  Van Dyck Jean (XVIIème)
* Saint-Omer : Forcheville Jean-Baptiste (1673 - ......)
  Petit L. (1856 - 1870)
* Tourcoing : Dhein Ch (1897 - ......)
* Valenciennes : Chatelin Adrien Benoît (1757 - 1759)
LUTHIERS ET FACTEURS D'INSTRUMENTS DE MUSIQUE A DUNKERQUE

(source : archives municipales)

ALLIAUME Pierre Henri : Facteur de pianos (1816 - 1849)

ALLIAUME Henri François : Facteur de pianos (1841 - ...)

ALLIAUME Pierre Jules : Facteur de pianos (1841 - 1846)

AUBERT Frédéryck : Facteur de clavecins (1777 - ...)

BAUGNE Joseph : Ouvrier Luthier (1841 - ...)

BOSSU François : Maître tisseur, facteur de flûtes, Luthier (1754 - 1790)

BROQUET Alphonse Ernest Léon : Facteur d'instruments (1772 - 1891)

CHEVALIER Henri Gustave : Facteur de pianos (1879 - 1891)

COFFEA Léopold : Luthier (1770 - 1809)

CLEENWORTH Roch Louis Benjamin : Facteur d'orgues (1856 - ...)

DEBRACKELARE Jean : Facteur de pianos (1867 - ...)

DELANNAY Jean : Luthier (1770 - ...)

DESHEYCK Henri Dominique : Facteur d'orgues (1843 - ...)

DUBOCHET François : Facteur d'instruments (1841 - ...)

DUBOCHET Louis Augustin : Facteur de pianos (1806 - ...)

DUMORTIER Guillaume : Luthier (1770 - ...)

DUMORTHIER François : Facteur de vielle (1764 - 1769)

FRANÇAIS Jules : Facteur de pianos (1856 - ...)

HARDY Armand Joseph : Luthier (1797 - 1808)

HEYDEN Henri : Luthier (1848 - 1850)

HEYDEN Jean Henri : Luthier (1811 - ...)

HOSTEKIN Charles : Facteur d'orgues (1846 - ...)

HUBANS Charles : Luthier (1840 - 1862)

LABITTE Alexandre : Facteur d'instruments en cuivre (1847 - 1861)

LÉBRAND Guillaume : Luthier (1765 - 1795)

LÉBRAND Marie Victor : Facteur d'instruments (1765 - 1769)

LECLAIRE Pierre Jacques François : Ouvrier Luthier (1835 - 1841)

LOUGUE Alfred : Luthier (1891 - 1906)

MASSE (Mâché) Isaac : Luthier, maître tisseur (1760 - 1790)

WIESSEN Edmond Charles : Facteur d'instruments de musique (1866 - 1877)

WOLLIN : Luthier (1805 - ...)

PELIEJ Philibert : Luthier (1911 - ...)

PILLEMENT Claude Joseph : Luthier (1893 - 1837)

PILLEMENT Charles Nicolas : Luthier (1834 - 1854)

PILLEMENT Jean François : Luthier (1895 - 1802)

PLUMEREL François : Luthier (1849 - 1873)

PREVOST Louis Alphonse : Facteur de pianos (1836 - 1843)

QUEKERES : Facteur d'instruments de musique en cuivre (1877 - 1878)

ROBERT Charles Nicolas : Facteur d'orgues (1843 - ...)

RUEL Lucien : Luthier (1901 - ...)

VANTROVEN Jacques Auguste : Facteur de pianos (1856 - 1852)

VERROU Pierre Benoît Benjamin : Facteur d'instruments en cuivre (1849 - 1856)
Re: Scraping Plane in FoMRHI No. 37

Immediately after reading Comm 571 from Robert Greenberg, I went about making one of the planes. Since my workshop is small and I have few machines, I went down to the boat workshop here at the German Naval Academy where I teach. One of the older craftsmen was very interested in the project and mentioned that his grandfather, also a boat builder, had had a similar tool for making mouldings. I thought at first he meant the regular moulding planes but he said no. A couple of days later he brought me the tool and I spent a couple of days trying it out. I find it combines all the advantages of Greenberg's plane and the scratchstock.

The enclosed sketch of the tool describes it better than I can do it in words. The sketch is not to scale but here are a few figures on the various dimensions:

- Blades: 15 x 55 x 1
- Shoe: 35 x 110
- Fence: 35 x 20 x 11
- Height of Frame at Blade: 45
- Total Length: 290

All measurements are in mm. There are a total of four blades included with the tool, each having two different profiles, one at each end. The profiles are filed straight across and through the slight angle of the holding part, present a sharp edge to the wood. The adjustable fence is a truncated oval which allows the plane to be drawn around curves in the material.

In the meantime I have made a crude but workable copy of this plane using a length of 5mm thick angle iron I got at a junk dealer. Perhaps some of you in England may be able to find an original in a second-hand store or at a flea market.
Robert H. Cronin

Froghill Comm. 587

Materials and Tone quality

With Mr. Segerman’s permission, I’d like to report an experience with modern instruments (after all, they’ll be historical, too, some day). Last August the International Double Reed Society met in Graz, Austria. At one of the sessions, a representative of the English firm of Howarth spoke about making oboes of rosewood instead of the traditional grenadilla. Basically, he said that the rosewood was more difficult to machine, and more pieces of rosewood had to be rejected; therefore the rosewood oboe was more expensive to manufacture and was priced correspondingly higher. No claims were made regarding tonal differences between the two woods.

Next, an oboist appeared, who asked the members of the audience to close their eyes while he played rosewood and grenadilla oboes, thus performing a single-blind test. Afterward, he asked the listeners to express a preference for one of the two instruments. A handful preferred the grenadilla oboe, another small number liked the rosewood horn, and the rest (a majority) could not distinguish between the two.

The German firm of Hans Kreul then showed their rosewood English horn, which was likewise played for comparison alongside the standard grenadilla model, with the same results.

Some explanations come to mind:

1. The majority opinion was correct, and there was no discernible difference in tone.
2. There was a discernible difference, detectible only by the experienced Oboists present. The others, mostly bassoonists, weren’t able to appreciate the nuances of oboe/English horn tone.
3. There was a real discernible difference that any fool should have been able to hear, but the acoustics of the room somehow obscured it.
4. There should have been a difference, but the player blew each instrument differently in order to obtain the sound he wanted, which was accordingly the same.

Readers may wish to suggest their own explanations.

Instruments, of course, are made for, and sold to, players, and a player may well prefer one material for reasons having nothing to do with tonal differences detectible by an audience. The rosewood is pretty to look at, and makes a lighter weight instrument to hold. Total impressions are important, and a light, easily handled horn may be imagined to be acoustically more lively, resonant or whatever. Regrettably, the players didn’t enlighten us by giving us their impressions of the different instruments.
A Contribution to Authenticity in the Art of Drum Making

The following is a brief summary of a document originating in Babylonia, probably early in the first millennium BC, entitled 'Ritual to be followed by the Kalu-priest when covering the temple kettle drum.' (1) I omit most of the ceremonial details, because I suspect that few if any of us would be entitled to perform them, and that the gods would not take kindly to the fumbling attempts of amateurs. See also the warning at the end, which may be the first recorded injunction to keep visitors out of the workshop. Words in parentheses are my interpretation of the text, or comments thereon.

When you are confronted with the task of replacing the head of the kettle drum, proceed as follows. An expert shall inspect a sound black bull ... if it has ever been struck by a staff or touched by a goad it shall not be taken for the ceremony.

On an auspicious day you shall (sweep out the workshop). You shall make a libation of prime beer. You shall place the bull on a reed mat, tying his legs with a bond made of goat's hair. You shall (make ready offerings for the twelve gods) ... You shall set up the kettle drum. You shall slaughter a sheep ... and make a libation of prime beer, wine, and milk. You shall draw the curtains shut.

You shall whisper (ritual encouragements) into the bull's left and right ears through a reed tube. You shall sprinkle the bull with cedar resin. You shall purify the bull, using a brazier and a torch. ... Then you shall cut open that bull ... You shall burn the bull's heart before the kettle drum ... You shall bury (the body) ... and arrange it so that its face points to the west.

You shall take the hide of that bull and dip it in fine flour made from clean barley, in water, beer, and first-class wine. You shall press it with fat from a clean bullock, alum from the land of the Hittites, and gall nuts. With it you shall cover the bronze kettle drum. On it you shall stretch a linen cord. (? a snare, but you take it off later, apparently. You also do something unclear with the tendon from the bull's left shoulder.) You shall sacrifice a sheep ... make a libation ...

On the fifteenth day you shall cause the bronze kettle drum to be brought forth to the presence of the god Shamash (the sun god - does this mean you are to finish the job out of doors? It might be wise, in view of what is to come). You shall sacrifice a sheep ... make a libation ... recite prayers ... You shall anoint the kettle drum with animal fat and filtered oil ... You shall purify it with brazier and torch (1). You shall bring the kettle drum to the presence of the gods, setting it in barley seed ...

This ritual, which you perform, only the properly qualified person shall view. An outsider who has nothing to do with the ritual shall not view it; if he does, may his remaining days be few.'

It appears from (2) that the technique given in this text for treating the skin was a widespread and regular procedure in ancient times.


2 Reed, R: Ancient Skins, Parchments and Leather, Seminar Press 1972
I want to challenge an apparent axiom of music history — the notion that, leaving aside a few crude transitional forms, Goths and Christians between them put an end to the manufacture and use of musical instruments in the Roman world. This notion has been created and promulgated by scholastic model-makers operating on the principle nescio ergo nihil erat; its very plausibility renders it suspect; and even the most elemental acquaintance with humanity gives it the lie. We must beware of scholars: they love to delimit, to establish boundaries, to construct historical models, and to posit nothing as a fact in areas where they know nothing. At their worst they reject what may be facts (e.g. contemporaneous human and dinosaur footprints) in the name of theories as supposedly inviolable as they are actually unproven.

We may best defend ourselves against theoretical scholars, denizens of libraries, by keeping our eyes constantly on the real life of our fellow-men, and by asking how likely it is that humans like us would have done anything that the scholars say they did. For instance, is the love of instrumental music so shallowly rooted in our being that an apparently hostile religious environment and a series of foreign invasions can eradicate it completely? I don't believe it. Human desires to express and create don't disappear when they encounter opposition. (Persecuted Huguenots came to Ireland, resumed their crafts, and gave us things like Waterford glass. Highly creative people in concentration camps with next to no tools have made jewellery from bits of aluminium and toothbrush-handle. Messiaen didn't write Quartet for the end of time in a university studio.) Even when you make something illegal, it doesn't disappear — it merely goes underground (alcohol in Prohibition, secular music in Puritan England). Legality apart, look at instrument-making today! Many 'early' instrument-makers face the most intense economic adversity; many would earn twice the money for half the work if they chose to enter, or re-enter, some other profession; and yet they persevere. People who really want to make instruments are unwilling, whatever the cost, to do anything else.

What little I know about my fellow-man makes it impossible for me to accept any of the following ideas:

(i) The arts disappear in adverse times.
(ii) There was no ancient instrumental folk-music, and therefore no underground hiding-place for the art-music of antiquity.
(iii) Christianity and the barbarian invasions totally destroyed both the demand for musical instruments and the opportunity to use them.
(iv) During the period at issue all instrument-makers either starved to death from lack of custom, took up an alternative trade, or were murdered by passing Goths.
(v) European instrument-making had to start again from scratch during the early Middle Ages.
(vi) The Arabs taught us everything.

Has anything survived, then? And how can we tell whether something is a survival or a spontaneous resurfacing? The anthropologists teach us that given the nature of humanity certain forms and processes will come from inside us, independent of tradition. C.S. Lewis may have had something of this notion in mind when he wrote (The Allegory of Love — Oxford, 1975 — p. 1): 'Humanity does not pass through phases as a train passes through stations: being alive, it has the privilege of always moving yet never leaving anything behind. Whatever we have been, in some sort we are still.' So our response to
'early music' is based on something inside us: we are not so much apprehend­ing something new and strange as recognizing something old and kindred. J'ai déjà vue — et dont je me souviens, as Gérard de Nerval says in what must be the first ever early music poem, Fantaisie. Things live on in us. Any § 'hunting finale' will strike your ear afresh, or rather as it should, when you listen to it after spending a Saturday afternoon in the saddle. (Things live on in animals as well. Cows of the present century, Anthony Baines tells us, are powerfully affected by the sound of even a modern French horn played at the gate of their field.)

But I am really concerned with unbroken traditions, not with innate things breaking the surface. Has anything musical survived the avalanches of history? I think so; here's one possible example. You don't need to know a frightful amount about ancient Greek music to know that the falling diatonic tetrachord

is pretty important. For what it's worth (many suspect it to be a fake), here's the opening of Pindar's first Pythian ode as cited by Naumann (The History of Music — London, n.d. — p. 140 of volume 1).

I wonder whether the four notes used for Xροδέξ φορ-μυνέ Α·πολ·λων·νος (= golden lyre) are an instrumental imitation in the same class as Purcell's Sound the trumpet. But let's move on to baroque times. En route we find many early European melodies with a range of a fourth and a falling tetrachord in their tissue, like the old Icelandic lullaby Einn guðri hiððinni (H. Helgason, Farsælida Frön — Reykjavík, 1952 — p. 6).

When we reach the seventeenth century we find the falling diatonic tetrachord regularly employed as a ground bass. When we arrive at our own century we find it still being used in flamenco guitar music — in fact, the chord-sequence D minor, C major, B♭ major, and A major spells Spain to the average modern ear.

If I'm right, if bits of actual music can and do survive, then it seems fair to ask whether pieces of instrument-making technique can survive as well. Years ago there was a lively exchange in Early Music (people weren't afraid to be lively in those days) when someone came out with a rather pseudo sentence like this: 'It is to be hoped that the "Cremonese" school of medieval fiddle-making is doomed.' Someone else replied, with great sense, that the first Cremonese-and-wherever violin-makers most likely drew on an existing fiddle-making tradition, and didn't invent maple+spruce, purfling, and so on by themselves. Quoting from memory, I think Werner Bachmann says somewhere in The Origins of Bowing that the advantages of pine/fir soundboards were known as early as the twelfth century. And going back to comm. 508, I've argued that what must be a plectrum guard on an ancient Greek kithara bespeaks a softwood belly. What of the almug wood used for Solomon's harps and psalteries (I Krs. 10. xii)? We don't know what almug means, but since it was also used for rails or pillars (same reference) it is likely to have been neither a softwood nor a rare novelty timber like bog oak. Given the musical sophistication of both Solomon and his father, it is only possible to believe that almug was deliberately used for its tonal properties. Did the Israelite chordophones have cedar bellies? It is tempting to think so: cedar, like almug, was readily available in Lebanon (II Chr. 2. viii). Some of them may even have had gut strings:
which means 'stringed instruments' in both Ps. 45, viii and Ps. 150, iv, arguably means 'guts' in Ps. 68, xxiii.

But Solomon's instruments have been neither preserved, depicted, nor described, so they belong to the realm of the unknowable. My only point in mentioning them is to posit the likelihood that optimum materials were sought after as much three millennia ago as they were three centuries ago. Let me return to my ostensible subject, and conclude this rather diffuse communication, by looking at three statuary instruments (I'm relying on line-drawings of statues that I haven't seen, so be warned) and suggesting the employment of techniques which we associate with the modern age. I'll precede my three figures with a couple of thoughts about the large kitharas of comm. 508: first, planks 24" by 2" in section were presumably as rare in ancient times as now, so the belly was probably a jointed affair like that of the lute; secondly, the large vaulted back was certainly a lute-maker's job — built over a mould.

All three figures below show forms of the small (and later) kithara. Figs. 1 and 2 come from the article 'Cithara' in Encyclopaedia Britannica (11th edition); fig. 3 comes from Naumann, op. cit., p. 120. Fig. 1 has belly and back overhanging the rib in a manner reminiscent of the violin. The back is flat below the arms. Figs. 2 and 3 are more or less front and rear views of a slightly larger instrument; fig. 3 seems to have a vaulted stave-back, and brings to mind one form of the guitar. Finally, the curved and necessarily hollow arms of all three instruments indicate some kind of heat-bending technique like that used for viol and violin ribs.

If anyone who has seen these statues in the flesh can either confirm or refute what I think I see — aut videt aut vidisse putat per nubila lunam — I'll be very grateful. Fig. 1 is the Pio-Clementino Nero Citharoedus; fig. 2 is the Vatican Apollo Musagetes; and fig. 3 is the Vatican Terpsichore. It would be rather thrilling if stave-backs, bending irons, and who knows — purfling? — were in regular use two thousand years ago.
1984 FoMRHI List of Members - 3rd Supplement as at 18th January 1985

* in left-hand margin = change of address or other change.

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* Eric Franklin; new tel: Hitchin 712480.

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* Fritz Heller, 35 Haut Vinave (not 43 - rest the same).

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Organological Index

All instruments: Cajsa Lund Percussion etc: A.C.Bashford
Strings Instrs gen: Paolo Barattini Richard Jones
Benjamin Bland Bengt Lönnqvist
George Emerson

Dulcimers: John Cummins

Keyboards gen: George Emerson Russell Mooney

Harpsichord etc (clavicytherium (c):
A.C.Bashford, h Peter Bavington, hvc Harry Shorto, v
Lute: M.Armand-Pilon John Cummins Berkley Queree
Ramon Blanco John Minnitt

Guitar: Ramon Blanco John Cummins

Vihuela: Ramon Blanco John Cummins

Mandolin: Ramon Blanco Hirotaka Watanabe

Bowed Strings gen: Kit Galbraith Bows: Jeffrey Hildreth
Rebec: A.C.Bashford Fiddle: A.C.Bashford
Violin fam: Jeffrey Hildreth Hurdy-gurdy: A.C.Bashford

Viola da Gamba: A.C.Bashford Thomas Rein

Harp: Jeffrey Hildreth Hirotaka Watanabe

Wind Instrs gen: Pietro Sopranzi

Woodwind gen: Richard Jones Garth Stiles

Traverso: Jan Bouterse Cathy Powell
Ardal Powell Pietro Sopranzi

Recorder: Jan Bouterse Pietro Sopranzi
Caroline Jeanpretre Garth Stiles

Clarinet: Garth Stiles Oboe: Marsha Taylor
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**Geographical Index**

- **Australia**: Russell Mooney, Vic
- **Italy**: M. Armand-Pilon, P. Barattini, Pietro Sopranzi
- **Netherlands**: Jan Bouterse
- **Sweden**: Cajsa Lund
- **Switzerland**: Caroline Jeanprêtre

**United Kingdom**
- Anthony Baines, Avon
- Bath Coll F.E., ----
- Andy Wooderson, SE18
- Berkley Queree, W. Midl
- William Sneddon, Nthmb
- John Weston, Notts
- Paul Rans, Dorset
- John Cummins, Leics

**United States of America**
- Jeffrey Hildreth, CA
- George Emerson, IN
- Marsha Taylor, --
- Ardal Powell, VA
- Sand Dalton, MA
- Cathy Powell, --
- Venezuela: Ramon Blanco
There has been no 'early' music revival to speak of: there has been a revival of some Renaissance music.

Apart from a couple of pieces like Alle psallite which audiences find funny, medieval music has no appeal to the moderns.

No serious work has been done on medieval fiddles since Bachmann. Makers, players and above all scholars are scared of medieval fiddles.

The rebec, which more than either viol or crumhorn deserves a book to itself, has been the victim of a cover-up.

Until the 'sixties there was one god — the symphony orchestra — and the piano was its prophet. Now we have an equivalent dictatorship in the early music world: viol, lute, keyboard, and recorder. We're embarrassed about all the funny noises we made in the 'seventies.

Since the death of David Munrow we have had nothing but Renaissance chamber music.

Many present-day consorts would cease to exist if forbidden to use descant recorders.

No one has the guts to make a Geigenwerck.

No one has the guts to make a lira da braccio.

A lot of modern viol-playing makes one wonder whether castrati are really a thing of the past.

Many depictions and specimens of ancient and medieval instruments may yet be unearthed.

There is a marked absence of music stands in medieval iconography. A note for authentic performers.

An organologist who has never made an instrument is as much use as an umpire who has never played cricket.

It is prostitution to take part in pageants, banquets and tournaments, especially if the music you play is anachronistic by several centuries.

Literary organology, so far from being in its infancy, hasn't even been conceived. Organologists don't read books.

Ornaments are d'occasion. If you have to write them into your part and learn them off before a concert, you're not ready to perform in public.

Straight repeats with a trill here and a turn there are no substitute for divisions, which are also d'occasion.

Instrument-making starts in the mind: plans and dimensional analyses are only part of the story.

No musical loss would be involved in making the lute with a guitar-style peghead.

Up to a point experimentation denotes genius; beyond that point, it denotes incompetence.

We will learn very little from anthropologists until they cease to concern themselves solely with savagery.

The history of music is not the tale of how one sort of mass turned into another sort of mass.

Many votaries of historical temperaments are merely poseurs.

Most of the current 'early' organs exhibit the personality of dying jellyfish and tepid lemonade. We need someone with the guts to copy Compenius' 1612 Frederiksborg organ.

I think I'll stop here. Happy new year, everyone.

David Z. Crookes
Some historical data on harpsichords

The sub-title of this comm. should be, The uses and abuses of historical data, since I want to reply to D Jacques Way’s suggestion that “the Old Ones tried out every conceivable method...so any possible way...is apt to be ‘authentic’.” (Comm. 574)

The Ruckers harpsichord of 1608 in the Russell collection is a fine example of what today we call a ‘transposer’: it has many of its original features, including Ruckers papers (painted over), original bridge and wrestpins (x-rays have been taken, which indicate that the Ruckers didn’t use a uniform length of pin) and inside unaltered Ruckers casework; all this despite the instrument having been converted to a piano. Samples have been taken of the paint used on the soundboard and of the soundboard and bridge timbers, and the results of these tests either published or awaiting publication, meanwhile being available by word of mouth.

The hole in the left cheek for the registers is larger than those found on other Ruckers, and is more neatly cut, with none of the ‘barbaric’ marking out scratches that were apparently acceptable in the Ruckers day. I met the craftsman who had cut out this hole, and he told me it was done at Russell’s insistence. He told me that Russell was convinced that there must be a plugged up hole there (as on all the other Ruckers harpsichords), and insisted it be unplugged. The craftsman insisted there was no plug and cut the present hole. This all happened so long ago now that we will never know for sure, but since there remains to this day the plugged up mortice for the treble half of the buff-batten, conforming in size and position precisely with the Ruckers norms, visible under the current paintwork, I’m inclined to believe this did have a hole, albeit rather more neatly plugged than is usual.

The stand of this instrument is interesting too. It is not like the stands found under other Ruckers instruments or in the iconography. It has been suggested that while a Ruckers harpsichord may have been worth exporting no-one would have bothered to import a stand (a ‘simple’ piece of carpentry, as opposed to a harpsichord which required more refined skills). Nevertheless I think this is an early stand, perhaps almost as old as the instrument. It originally had a drawer for the tuning hammer etc (which again points to a non-Ruckers origin, since the Ruckers provided cubby-holes in the instruments themselves), and was taller than it is today. A photograph of about 1928 shows the stand before it was cut down. What was done was to saw through the legs above the stretchers, take out a portion and join the two halves back together. The work was crudely done, and is plainly visible today. I should like to take the opportunity to thank the staff at the Russell Collection for their help, including pointing out some of the features noted above.

Using the data

Most people accept that a stand has little or no effect on the tone of an instrument, but the height of the stand, in conjunction with the players stature, length of arms and chair used (if any), does have a considerable influence on the feel of the instrument for the performer. The height of the stand also has a considerable aesthetic impact, a point aluded to by Gustave Leonhardt (6). So if one was interested in the subject of authentic harpsichord stands, particularly in the most important aspect of how high the keyboard is, one would have to approach the stand under the 1608 instrument with caution.
Now before I go any further I hasten to say that I use the word 'authentic' only in the commonly understood sense of the word:

Applied to a copy of an instrument: **'AUTHENTIC' MEANS 'LIKE THE ORIGINAL'**

Applied generically: **'AUTHENTIC' MEANS 'LIKE A TYPICAL ORIGINAL'**

This is not a dictionary definition of the word 'authentic' (1), but it is the commonly accepted meaning in the Early Music field. The 'original' here means the original when it was new, not in the state that it has survived today.

Obviously it is impossible to make a completely authentic instrument. So when Zuckerman Harpsichords takes a full page advertisement in Early Music to announce "the stand for this harpsichord is an exact copy of the Ruckers 1603 instrument" (sic), we can be sure they are exaggerating. I would be shocked to learn that they had made an exact copy of the stand as it is today, complete with sawcuts in the legs; surely no one is that interested in doing authentic performances of harpsichord music of ca 1928? I would be pleasantly surprised to learn that they had attempted a reconstruction of its original state, but I fear they did no such thing.

Note that with this definition of 'authentic' you cannot say that a wooden jack is more authentic than a plastic jack; the wooden one may be bristling with adjustment screws and the plastic one may have none. You can only say that the material of the wooden jack is more authentic than the material of the plastic jack. Still less can you say that one harpsichord is more authentic than another, at most you can point to this or that feature as being more authentic.

From the foregoing it should be clear that you can make an instrument with many, many authentic features, which because some crucial aspects have been overlooked does not have the authentic sound or does not sound at all.

Less obvious is the fact that the most important aspect of all which we would like to copy, the actual tone of the instrument is the least accessible; the actual materials recognizably survive today, but the sounds that the instruments made when they were new do not. Even listening to a restored old instrument gives you nothing much that you can write a FoHMRI Comm on, since there are no accepted ways of translating musical sounds into words.

So FoHMRI must, of necessity concentrate on what D. Jacques Way disparagingly calls archaeology. In fact, DJW is not averse to a bit of armchair archaeology himself. He tells us (FoHMRI Comm 307) that "Of course, the old builders used glue rather than oil varnish to bind the pigments" of the paint on harpsichord cases. If he intends to include the Ruckers in 'the old builders' then I think he is wrong; moreover his method of gessoing and sanding the case "until the surface is absolutely smooth and translucent", although suited to imitations of 18th century lacquer work, bears no resemblance to the methods adopted by the Ruckers (see my Comm 540). Great caution is needed when generalising about old instrument makers. It is not true that harpsichord makers were uniformly driven by a desire to 'make a quick buck' and a 'fine instrument at the same time' (Comm 573). There were makers who were happy to make rather poor instruments (though happily few of these have survived). Furthermore it is clear that much of the work of old makers is explicable only in terms of 'pride in craftsmanship' or 'adherence to tradition' or some such. Specifically, DJW (Comm 574) speaks of 'the crudeness, frugality, lack of finish inside old instruments' as if these were universal features of old instruments. Indeed the Ruckers were quite happy to use waney edged timbers for the upper braces, but they never needed to resort to the practice mentioned by DJW of using three bits of scrap wood for a bentside liner, since they were in production in such a big way that they always had large stocks of timber to hand. At the other end of the spectrum makers such as Hass and Taskin showed a much fussier attitude to the hidden surfaces. In fact Taskin reworked such rough timbers when he had a Flemish instrument
So if you are doing a copy of a Ruckers instrument then it is authentic to use rough timbers inside, while if you are copying a Taskin it is not. But I doubt that you could hear or feel or see the difference at any time after the instrument is finished, so you would presumably be doing it for your own satisfaction, or in order to be able truthfully to advertise that the style of workmanship inside the instrument is authentic. Curiously enough, most modern craftsmen find it difficult to use waney edged bits of timber nailed to the liners for their upper braces when ‘doing’ a Ruckers! for reasons which I suspect are similar to those of Taskin, they prefer to work the pieces to a ‘reasonable’ finish. Moreover a kit maker would find it difficult to sell kits with such parts; people generally have strict limits on the amount of authenticity they want.

 Usually this is because of ‘problems’. Sometimes these problems are quite straightforward: a player might wish to retain his piano technique, and ask for an keyboard with some unauthentic feature, thinking this will solve his ‘problem’. Othertimes it is not so easy! 17th century Flemish stands are typically too high for a typical modern performer to play from a typical chair, and too low for him to play from standing. There are quite a few aspects to this relatively minor problem, which have often been discussed (though not much in print); I feel that it is an unsolved problem, in the sense that I don’t feel I know in detail what were the typical posture(s) adopted by performers in the 17th century. paintings of the period notwithstanding.

D. Jacques Way describes a ‘problem’ that may fall into the latter category (Comm. 574). With variations in the weather he finds the vertical distance between plectrum and string varying too much. His approach to this problem (Comm 574) is to bring his ‘profound respect for the past’ and his ‘own intelligence’ to bear on the problem, and to offer a solution ‘without any shred of evidence from archaeology’. His suggestion is ‘when the case swells... add a layer of veneer, or glue tabs of cloth under the back rail’ (of the keybed). I should like to present some shreds of evidence from what he calls archaeology, and offer some other explanations and ‘fixits’.

1) In the case of the Ruckers, the keyboards of the harpsichords and virginal were held down at the back by two small wooden blocks. These were placed to leave no margin for raising the backrail as suggested by DJW. 

2) In other cases (eg Taskin) the back-rail is not so constrained, and indeed I can confirm that techniques of shimming the action were employed. For example, the Couchet/Taskin in Stockholm has pieces of 18th century playing card to adjust the separation of the upper and lower manuals, and to adjust the location of the lower manual so that the lower manual 4’ jacks do not foul the upper manual key ends. This shred of archaeology suggests the best material for such shims. DJW’s tabs of cloth would make subsequent removal messier, and his veneer would be a trifle more difficult to cut to shape.

3) End adjustments for jacks (other than screws) are not uncommon on old harpsichords: it seems likely that many of these date from the historical period, being found as they are on instruments that show no signs of having been worked on since. These include sealing wax tips to the jacks, wooden pegs into the bottom of the jack, and wooden extensions which fit into tapered slots in the end of the jacks. (Incidentally the quickest modern method I know of for shimming jacks is to glue on a cardboard shim with the advent of glue in tubes it quite painless, unless you have to do it 180 times). So while the use of shims for adjusting the action (where possible) is an authentic 18th (and doubtless 17th & 16th) century practice, DJW’s solution to the problem of expanding and contracting case sides by shimming the back rail leaves us wondering how the Ruckers managed (2).

I would like to suggest another possibility: it is that the old makers seasoned their timbers. As DJW himself says (Comm. 574) the problem with harpsichord cases is only there for 20 or 30 years. So it would seem reasonable to guess that seasoning one’s timber for 20 or 30 years would lick the problem. Most readers of FoMRHI will not need
convincing that there is a difference between drying timber and seasoning it. The reason for this seems in part to be because there is a hysteresis effect in the drying of timber. That is, if you take a tree, saw it down, plank it and stand the stack in stick in a steady breeze of air of a constant temperature and humidity it will come into equilibrium at say 18% moisture content (m.c.). If now you raise the temperature and/or drop the relative humidity of the air the timber will dry out further, lets say to 10% m.c. If now you restore the breeze to its original humidity and temperature, the timber will come into equilibrium at a lower m.c., such as 15%, instead of returning to the value of 18% it had before in those conditions. You can repeat the procedure any number of times, with a similar effect, subject to a law of diminishing returns. Thus the object of seasoning timber is in part to take the wood through cycles of damp and dry so that it reacts less to climatic changes.

Now let us suppose for the sake of argument that the Ruckers did indeed use timber naturally seasoned for 50 years. Clearly we could never in our lifetime set up a manufactory making Ruckers copies using authentically seasoned timbers, since the necessary stocks of the correct timbers do not exist on planet Earth. But in this circumstance do we have to find "a solution that does not violate the evidence found in old instruments" (Comm 574). The best solution may well be an unauthentic one, in the sense of not being typical of historical practice; if you have been forced into doing one thing unauthentically then it is no good going blindly ahead doing everything else authentically. You may well need to compensate by introducing some further, more or less authentic feature.

So here are a couple of other practical schemes for taming frisky timber and its influence on harpsichord adjustment. The first, which I have used, is to take your stack of timber into a cool damp environment and let it come to equilibrium. Then (by degrees) move it to a warm dry environment (the sort of conditions you get during a typical long hot dry spell in Western Europe), and as soon as it reaches equilibrium take it back by degrees to the first environment, and so on back and forth. This isn't as authentic as waiting round for a real long, hot dry summer, but it seems to be a step in the right direction (5). Another factor we should consider is that we often want to use our authentic instruments in unauthentic climatic conditions(4)! (see DJW's comment in FoMRHIQ 23, p4). More radical deviations from authentic practice may be called for (eg synthetic glues as mentioned by DJW). One such radical solution to the problem of changing case depths that has been going the rounds for a number of years is as follows. What you do is hang the keybed from the wrestplank by means of iron straps. In theory, the keyboard and strings keep in step with each other all the way; without the need for the musician to adjust anything.

I hope I am not giving the impression that DJW has not written useful things up in his Comms. I think what he has to say on the subject of plywood is good sense, and I hope he will keep us up to date with his experiments on crowning soundboards. But when he makes sweeping statements on matters historical someone should speak up. Thus: "The truth is that the tensile strength of ferrous wire is never a problem, since it is so easy to achieve (even with ancient technology)" (Comm. 539), compare this with van Blankenberg (1739)

"For you must know that the Ruckers laid the bridges on the soundboard as far apart as ever the strings could bear if they were to attain the right pitch" and later "...harpsichords harmed...on the one hand through strings breaking because the instrument cannot stand well so high..." (in pitch).

Contrast this with the following by DJW (from FoMRHIQ Bull. 21,p5) "A dozen times it is repeated that strings must be brought 'close to their breaking point' for the best sound. This can lead to some very nasty sounds".

I must say I found his remark about Malcolm Rose's wire somewhat condescending (Comm 576). It is interesting to contrast the way these two makers have developed and marketed Red Brass. D. Jacques Way! "In the past five or six years we have become conscious that we certainly don't need all the fuzz and noise of bronze in the bottom
octave" (Comm 576). Contrast Malcolm Rose who takes specimens (mainly I believe from square pianos, where specimens are ten a penny, but also from such important instruments as the Vaudry and Hensch harpsichords) of wire and measures their properties. DJW: "I have been careful to do all this work with wire without reference to mathematical formulae or abstract theories" (Comm 576). While Malcolm Rose uses the known metallurgical theory to make important observations on the nature of the old wires. (For example, the specimens wrapped around the tuning pin have not been under such a high tension as the sounding portion, see FoMRHD II, p13). I'm sure that the only reason Malcolm hasn't completely cornered the market is that people are waiting to see the actual figures for the old wire on which his strings are based. The latest news is that this information should be available later this year (3). Already available (4a) are some very interesting passages extracted from archival material by Remy Gug, who has been approaching the production of authentic wires more from this angle. Of course people listen to the wire (and instruments) that their observations, theories and experiments have produced. In this sense they "build with their ears" (Comm 576). If you do not like what you hear, then I would suggest you do some more observing, theorising and experimenting. The 'authenticity school' would say that you are more likely to get a marvellous sound by staying within the orbit of the authentic, since the pre-nineteenth century makers built on a living tradition. If for whatever reason you decide to incorporate some unauthentic feature in your instrument, well and good. Do so boldly and shamelessly. But do not pretend that you think it authentic, on the grounds that 'The Old Ones tried out every conceivable method' (Comm. 573).

Footnotes:

(1) The origin of the curious use of the word authentic in Early Music circles is that it is a reference to the expression 'authentic copy' that is genuine copy, that is a instrument in which features have actually been copied.

(2) Note that the Ruckers case cannot even be dealt with by slipping an extra layer of cloth beneath the keys, because of the over-rail.


(4) Unauthentic climatic conditions means climates unlike those that the original instruments typically experienced at the time they were built. Even in the 18th century, untypical climatic conditions were sometimes anticipated (cf the laminated soundboard).

(4a) Published in the latest edition of Musique Ancienne.

(5) Interestingly, Mozart commented enthusiastically on a piano maker who exposed his soundboards to harsh weather conditions so as to forestall later movement.

I didn’t expect to return to this subject so quickly, but I should like to clarify some points which may help those who want to try the hot iron method. In addition somethings I wrote last time have been somewhat misunderstood, and I have touched on some raw nerves, for which I should like to make amends.

Firstly on a practical note: the firebars I refer to are commonplace in Britain; but it seems unheard of on the continent and in the U.S.A.; they cost about £2 and consist of a heating wire wound on a ceramic core, with two terminals. Bob’s solution to their non-availability is markedly more sophisticated, but by no means necessary; in particular temperature control (which I had with mine) is unnecessary; if it gets hotter than you would like just pull out the plug. The point here is that the job is done so quickly that you don’t need such refinements. Any sort of arrangement of electric or gas fires delivering 3kw fairly evenly to your iron should be just fine.

I am sorry if I gave the impression that harpsichords made with steam bent bentsides might be unstable. What I said was “if...a steam-bent plank will lose much of its curve after only a few months...”; I was merely incredulous that a bent plank would largely straighten out. The story behind my incredulity is as follows. When first I tried hot bending, I got a bit carried away and before I could say Jack Robinson, I had produced a plank so curved that I toyed briefly with the idea of making an Italian Harpsichord. One of the problems with using a curved iron is that there is really no way to go back once you have over-bent! if you turn the plank over the convex surface touches the convex surface of the iron with such a small area of contact that nothing pleasant happens. Well, I put that bentside aside, thinking I might find some use for it, but a couple of years later it was still hanging about so I threw it outside. It has now weathered two droughts, torrential Welsh mountain rainfall and gale force winds for six years or so. Although I dare say it has warped somewhat it is still as bent as ever. (In fact, should anyone be contemplating an authentic Italian outer case...).

Now, like DJW (Comm 573), I’ve always been inclined to believe that once a piece of wood is bent it’s bent! that the piece of wood is the same no matter what method was used to get it bent. But perhaps this is too simplistic. One possibility that has been suggested to me is as follows. The wood bends because of the creep of a substance called lignin in the plank, which prevents the shear between the fibres. The lignin creeps much more easily – indeed it flows – as you raise the temperature. Now when a piece of wood is bent, the fibres on the convex face have to slide over each other, while those on the inner face do not. In steaming in a steam box, heat is applied to both faces simultaneously, and the plank will ‘give’ before the heat has penetrated to the centre. With the hot iron, you must get the heat through to the far side of the plank from your iron, therefore the lignin in the centre of the plank will always be fully fluid. This would explain why Bob Greenberg finds that high heat is the secret of successful steam bending. The moral of this tale may be, if you are steam bending, don’t be too impatient, give the plank a good long steam, not just sufficient to bend the plank. Otherwise you may leave internal stresses in the timber that as the plank is cycled through humidity changes will ‘work’ the plank, (unless countervailing forces provided by the structure of the instrument are present).

I did not suggest (in Comm. 540) that steam bending was a method not used in earlier times. Indeed, I mentioned that it was only slightly higher tech than cold soaking (and less high tech than an iron) which argues that it will have been tried. I would be somewhat surprised if we could not find a tradition where it was employed. People do try all sorts of things, but they do not invariably settle on the most efficient, otherwise they would all do the same. (This is as true today as then). But when we have some knowledge of one undoubtedly authentic method, such as the cold soaking, we should not airily dismiss the method as if the old makers were a bunch of idiots, but try to discover whether we are missing some important factor. Have we understood the method aright? Is it really necessary to soak the plank so long? Is it really necessary to dry it so long?
Remember that one source speaks of drying in a baker's oven - old bake-ovens were large beehive affairs of stone, which after a baking took several days to cool. Is it possible that the drying was done in a very hot oven? (Such a process would cause honeycombing and collapse in green timber, of course).

Some of the statements made by D. Jacques Way in Comm 573 are misleading and require correction:

"...it takes the strength of an elephant ..." this is not the case in my experience, indeed if you put a couple of housebricks on the free end of the plank, you can sit back and watch it bend.

"...confirmed hot-iron benders come over to borrow our steam box..."; clearly not confirmed hot-iron benders; something radically wrong with their technique. Once again, before we dismiss an undoubtedly authentic method of making bentsides we should examine the evidence (Burn-marks - do they get it that hot? A locally even charring along the plank - is their iron of large enough radius?) and not just conclude that the old makers were being foolish.

"...so long to get the heat inside ... without damaging the wood"; the word 'damaging' here is used emotively, to turn people away from doing something without thinking; if you saw through a piece of wood to make a harpsichord then you 'damage' that piece of wood. The Ruckers charred the concave surface of their bentsides; I am willing to try what seems to be the Ruckers method because I know their instruments were successful.

"I am not willing to believe that the beech-wood double bentside of a Vater was charred to bend it...beech is such a lovely steam bending wood"; beech is a lovely hot bending wood and a lovely cold soaking wood. The fact is beech is a lovely wood for bending! I am willing to believe Vater used whatever technique was traditional in his school, or he may, for all we know, have been one of the innovators that starts a new tradition.

"If I find three white men in Africa, I don't conclude that all Africans are white"; If I choose three men at random from Africa there is not a chance in a million that they will all be white. The Ruckers are extremely unlikely to have changed their method of making bentsides between 1580 and 1680; their building techniques show no evolution in this period.

"If I were hand-planing a plank for a bentside, I might very well make it a bit thinner when the big bend was to come -- maintaining the thickness at the top of course," (sic); there are two mistakes here. Firstly for the Ruckers workmen hand-planing was not a romantic pastime but simply work! they give abundant evidence of not planing more off their timbers than necessary for the purpose in hand. Therefore they would not thin the bentside unless they anticipated saving time in the bending. If we take Bob Greenberg's figure of 30 mins for a 3/4" bentside and mine of 20 mins for a 9/16" bentside there is clearly nothing to be gained by tapering the board by 1/16". (On the other hand, they would have turned the board end-to-end to take advantage of any taper they ended up with after planing the board smooth; I suspect that they would have deemed it advantageous to use the thicker end at the treble, where the charring is thickest.). Secondly, because the Ruckers were removing the effect of charring the bentside, they were unable (or rather, unwilling) to follow D. Jacques Way's advice given here to maintain the thickness at the top. So they didn't. For example the 1633 harpsichord in Edinburgh has the bentside 1/2" thick in the treble and 9/16" thick in the bass, at the top.

"the Old Ones...none of them ever gave a thought to 'authenticity' ..."; of course they didn't, it is us that does that. We do it because we want to make instruments like certain ones made hundreds of years ago. "The Old Ones" didn't want their instruments to be like ones made hundreds of years before their time, so they didn't give a thought to authenticity. So it is with Steinway today. This magazine has the stated objective of promoting knowledge about the nature of musical instruments before the present day. So for so long as we continue to use the word authentic in its commonly accepted sense viz. 'like the original' then this magazine is 'about' authenticity. No moral implications.
Summary

The relative pitches of the different models of Ruckers instruments has been discussed by G. Grant O'Brien (1),(2),(3). The question as to what actual pitch they may have been tuned to in various places at various times is somewhat trickier, but is nevertheless slowly yielding to investigation as progress is being made in our understanding of the texts (Praetorius in particular)(9) and of the wire (5). In this Comm. I want to show that our current best estimate for the design pitch of the normal Ruckers harpsichord was a tone below Praetorius' pitch (the Chor/Cammer-Ton of the Protestant chapels, a' = 430 Hz approx.). But that even in Antwerp, individual preferences concerning broken string replacement and performance circumstances may have encouraged pitches up to a tone higher to be used.

The Wire

We can be fairly sure that the Ruckers strung their instruments in iron in the treble, as distinct from steel. As Cary Karp has made clear, the two were sharply distinguished at the time, with the steel being used on instruments designed with it in mind. Although as Cary pointed out long ago (12), iron wire can be drawn to quite high tensile strengths, what happens is that after a certain point you start losing out to embrittlement. Consequently the tensile strength being striven for by the makers of the wire was dictated by the nature of the material, rather than it being a question of them going for the hardest wire their dies could withstand. It seems quite reasonable then to suppose that the design value of the tensile strength of iron music wire was the same in the 17th and 18th centuries. However with the gradual improvements in technology over this period it is easy to imagine that the quality of the wire may gradually have improved. This may have meant that thinner wire was easier to draw; wire may also have become more reliable and it may have become cheaper. These factors may have tempted people to use a smaller margin of safety. From this one could tentatively suppose that the pitch the Ruckers had in mind for their instrument of a given scaling was somewhat below what an 18th century maker would have assumed for the same scaling. Thus Taskin would have said that a Ruckers six footer was scaled to sound a semitone below a'=440, (1) while (bearing in mind that the Ruckers scaling was fixed in the 1580's) Ruckers may have said a tone below.

Before I leave the subject of wire, I should mention something of both practical and theoretical importance that I discovered recently. For many years people were torn between making their tuning pins with or without holes for the wire to go in. They liked the authenticity of no holes, but found it tricky to wrap the wire on the pin. This is all the trickier the harder the wire is drawn. Nowadays most people have settled for no holes, having found it much less of a problem with the more authentic wires. However, if for any reason you slacken off a string completely and it loosens on the pin, which can happen, it is more difficult to get it to 'stick' a second time. (This is because the wire has work hardened in being wrapped round the pin. This part of the wire will also have become more brittle, and is liable to break as you try to rewind it). I found myself in this situation recently and it occurred to me to pass the end of the wire through a flame to anneal it. This worked beautifully, going on to the pin like plasticene(7). You have to be careful not to anneal too far up the wire, of course, but this proved no problem. It is quite possible that makers kept a candle burning on their bench while stringing, and did this for all the strings, as it is always a help. Such a practice would have implications for the measurements taken of the yield points of historical wire in the sounding length and around the pin.
The second strand of my argument on Ruckers pitch hinges on the surviving written material from the middle of the 17th century (4). There we learn that the low pitched instruments are in 'Chor-Ton' while the tone higher ones (the five-footers) are for use in small rooms for playing courantes, allemandes and sarabandes. It seems reasonable to identify this higher pitch with the term 'Cammer-Ton' (ie chamber pitch), and so it seems that in the Ruckers circle the idea of a Chor-Ton for singers a tone lower than the Cammer-Ton for chambers was in use. This is in complete accord with Praetorius, who tells us that the Catholic chapels use a Chor-Ton a tone lower than their Cammer-Ton, while the Protestant chapels have both both Chor- and Cammer-Ton at the higher pitch, making life a bit difficult for the singers. Antwerp was, of course, a Catholic centre, the refuge, indeed, of English recusants such as Bull and Phillips. (Praetorius also mentioned that many organs in the German speaking lands were at higher pitches still, a situation which persisted into the 18th century, by which time the term Chor-Ton was in use for them, with Cammer-Ton keeping its original meaning as well as sometimes being used for tief Cammer-Ton, a semitone flatter. Hence the threat of confusion between the 18th century writers such as Quantz, for whom Chor-Ton was above Cammer-Ton, and the 17th century Catholic practice where Chor-Ton was below Cammer-Ton).

The problem of determining the pitch to which Ruckers himself would have tuned a six-footer now devolves on the determination of Praetorius's pitch. There is now a broad consensus on this question (11),(9)5 Praetorius Chor/Cammer - Ton was a trifle below modern pitch, giving a pitch for the common Ruckers instrument of about a tone below modern. The heavy gauges of wire suggested by G. Grant O'Brien (12) would not then result in quite such a heavy tension as at the typical 18th century pitches. (I mention this in passing, without intending to lend any weight to the 'heavy stringing' theory thereby).

To fill out the story, mention should be made of the other sizes (four footers, three footers etc) of instruments. These were not seen as separate pitch standards in the way that Chor- and Cammer-Ton were. Rather they were chosen because they were compatible with the parent instrument. That is the smaller instruments were made for their tonal qualities, and the scaling adjusted so that no more than a sharp or flat (in a transposition) separated them from the 'normal' size. This is argued more fully elsewhere (6).

So one conclusion from all this is that where we find the Ruckers exporting to Protestant centres (as for instance the cases where people were sent from the Northern Netherlands to bring instruments from Antwerp), we can guess that the five footers would have been supplied (7), since they would have offered a better margin of safety than would be had by stringing a six footer more lightly and tuning it up a tone. (Note that such re-tuning by a tone would not necessarily have been out of the question. The evidence is ambiguous! Couchet (1648) (14) was keen that Huyghens should tune his new instrument to the correct pitch, as determined by a pitch pipe, to get the best resonance. Duarte says of the small harpsichords that they are "usually one tone higher" (my emphasis). This could either mean that there was some flexibility in tuning, or that the small (C/E-short octave instruments) were either six footers or five footers, with the five footers being for chambers).

Van Blankenberg's statement, from The Hague in 1739 that "the Ruckers laid their bridges...as far apart as ever the strings could bear if they were to attain the right pitch", has to be read in the context of the pitch van Blankenberg had in mind, and not as a statement of what the Ruckers themselves were doing. (I have shown elsewhere (6) that van Blankenberg was not familiar with the original uses of the Ruckers instruments, particularly the muselaars and double harpsichords). We can deduce what pitch van Blankenberg has in mind from the discussion in 1721 about the suitability of the Schnitger organ at Zwolle for use with other instruments in concerted music. (10).
The recommendation was to lower the pitch of two stops by one tone to the pitch used in concerted music. At the same time they observe that the Nieuwe Kerk in the Hague has its organ pitched a semitone lower than the Zwolle one. The pitch of the Zwolle instrument has been determined to have been about a tone above modern. The data given by Mendel in this passage indicates that in the Northern Netherlands the high organ pitches common to German organs were the norm, while concerted music used the lower pitch (roughly modern pitch) that Praetorius had fought for a century earlier.

So van Blankenberg is saying in effect, that if you try to add an extra 3' to the Ruckers to the left of the original 3', thus lengthening the scale nearly a semitone, then you will get into trouble with string breakages. By van Blankenberg's time improvements in consistency of the wire available may have made it convenient to tune the six-footer to a pitch approaching modern, but not (in effect) a semitone higher still. (I am assuming here that van Blankenberg was talking of instruments based on the six-foot scaling, rather than the five-Foot, since these were overwhelmingly the commonest size the Ruckers produced, and he is talking generically about Ruckers harpsichords).

Finally a couple of more or less separate speculations!

The virginals were known as six-footers, three-footers etc, and for the Ruckers there is the well established correlation between this length (the length in Flemish feet of the instrument) and the scale and hence pitch of the instrument relative to the other sizes. What is intriguing is that if we examine the virginal by Haegerts (Amsterdam 160?) we find that it has the scale of a Ruckers five footer, but is five Dutch feet rather than five Flemish feet long (that is about 5 inches longer). Of course it would be easy to dismiss this as a coincidence, but I think we might be missing a characteristic pattern here. What I am thinking is that in the early 17th century the idea that a six-footer was an instrument of a certain pitch (the Chor-Ton of the Catholic Chapels) was held in common across Northern Europe. That is, that the 6-footer was an instrument with certain qualities (suitable for voices singing low) was accepted as natural, inevitable, despite the fact that people did not in fact mean the same length when they said foot. In other words it was accepted that if you were a maker making in a country (& trade) where the foot was bit bigger then your instruments would be a bit bigger! If this is right then when Mersenne says that the three footer sounds at 4' pitch (where 4 foot is the length of the organ pipe for the bottom C of the instrument), he is talking about an instrument of the same pitch as a Ruckers three-footer (or indeed any other three-footer), although it is the Paris foot he has in mind. I would expect this tradition to have died out after 1650.

The second speculation concerns silver strings! these are regularly mentioned in connection with spinets, and it has occurred to me to wonder whether there may not have been a second stringing system, analogous to the Iron/Brass one, using Brass in the treble and Silver in the Bass. Even more shifts of material might have been used on some of the instruments we now accuse of being foreshortened in the bass; the bad sounds we get from them may be the result of our primitive stringing technique. In this connection it is interesting to see these three materials all mentioned in the following quotation (Angelo Furio (1687-1723))

"... il cembalo codato et armato di corde d'argento o d'ottone richiede il suono piu grave del non codato, o sia spinetta quadrangolata armata di corde d’acciaio."

I take this to mean (I am no Italian Scholar so be warned!) that the cembalo codato (lit. 'tailed cembalo', ie harpsichord? or harpsichord with extended bass, ie long tail?) (when) strung in silver or brass demands a lower pitch than (either) the untalled one (the pentagonal spinet? or shorter tailed harpsichord?) or the rectangular spinetta strung in iron. Perhaps somebody more familiar with the field might take this up, as well as Galileo's remark that a harp he was discussing is strung in brass with a few iron strings at the treble like a spinetta.
Normally, that is. If the customer asked, he could be supplied with the lower pitched one. We can understand Christiaan Huygen's insistence on a low pitch instrument not in terms of his desire to achieve a particular pitch, he asked for one two tones lower than that of Mrs. Swan and was told that that couldn't be and is in no way the fashion. So he settled for one one tone lower, but in terms of his desire for a long-scaled instrument. The fact that he asked in the first place not for an instrument of some named pitch standard, but simply one 'two tones lower than that of Mrs. Swan', and the fact that he settled for one just a tone lower, indicates that he did not intend it for playing in consort with fixed pitch instruments. (Or rather, that he anticipated coping with any such use by retuning by a small interval (possibly zero) and/or transposing.) He apparently tuned this instrument or perhaps another to a' 409 Hz. (9). Duarte repeatedly mentions that the pitch, one tone below, called Chorista is the lowest ordinary tone of 'this country' (i.e. Flanders), presumably to avoid confusion with the choir pitch of the Protestant Northern Netherlands where Huyghens was based. Note also that the scaling of the surviving Amsterdam made virginal (see below) is a five-footer's.

(9) The New Grove, s.v. 'Pitch'
(11) Dominic Gwynne, FoMRHI Comm 342
(12) FoHMRHIComm 83
(13) Mendel, op. cit. p 47
(14) Ripin's contribution to the first Antwerp conference (1971).
POSSIBLE RECONSTRUCTIONS OF STRADIVARIUS CELLOS

The Stradivarian Museum in Cremona contains enough of Stradivarius' original plans to attempt a nearly complete reconstruction of three of his cello models, and to guess the possible form of a fourth model. There are no complete plans - only drawings of various parts of the cellos, and I was fortunate in being given facsimiles of these by a friend who visited Cremona. A few drawings are clearly labelled so that there is no doubt as to which cello they were part of, but in many cases it is a matter of finding parts that fit together.

The relevant drawings consist of the side of necks and pegboxes, the front of fingerboards and tailpieces, templates for aligning the fingerboards, and guides both to the successive widths of the scroll and probably to the widths of the foot of the neck and the diameter of the button and its chamfer. Examples of the last type of drawing are shown by Sacconi in figs. 112 and 153. I interpret the bottom of the scroll-width plan as follows:

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button-end with chamfer
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These various parts can then be judged against drawings of the appropriate bodies of surviving Stradivarius cellos, and an attempt made at reconstructions. I did not use all the surviving parts, but only those that fitted best. There could well have been many variations of the four models, as well as other distinctly different models, using the parts I did not use as well as parts which have not survived.

The drawings with this Comm. were reduced on a photostat machine from full-size drawings. Because of this method of reproduction, there is a small amount of distortion. The fingerboard-lengths and tailpiece-lengths, and the angle of the necks (except for the 5-string) were all reproduced exactly on my original drawings. The neck-pegboxes of the 'Ordinary' and 'Venetian' cellos were shortened by one mm, to allow for the slight cutting-into the foot to take the rounding of the body-end. For the 5-string cello, the neck is for the 'viola da gamba' version of the instrument, and the angle at the foot seems to be designed for a shoulder that slopes from the front of the body to the back. Therefore, for this cello, I changed the angle of the neck to what seemed to fit the best. The neck of the 'Model B' cello was cut off at a line shown 3.5 to 5.5mm from the foot (was this an alternative edge? - see Sacconi fig. 155), because this balanced the measurement of the space under the fingerboard given for fingerboard no. 256. (Fingerboard no. 256 length 449mm, less the space of 168mm under the end of the fingerboard = 281mm for the length of the neck along its top surface.) The bridges are all somewhat lower than the bridge-plans left by Stradivarius, because there would have been a surplus left for fitting. The length of vibrating-string, height of bridge, and angle of strings over the bridge are all the result of the manner in which I fitted the parts together.
The large 5-string cello is the most conjectural of all these cellos, because there are no existing Stradivarius cello bodies of this size. In their book on Stradivarius, the Hills mention on page 116 a cut-down cello made from an 'extra large' instrument dated 1684, which is also the date written on Stradivarius' plans of his large 'viola da gamba', and both instruments have pegholes for five strings. It is not clear how much the 5-string cello differed from the 5-string viola da gamba, but there are alternative neck-blocks, one of which is labelled 'V(iola) D(a) G(amba) mollo per par ii violoncello'. The drawings of the neck-pegbox, fingerboard, tailpiece and bridge suggest a body of about the length of 89cm that I have drawn, even though this is much longer than the large 5-string cello (the 'Bas-Geig de Bracio' of 80cm) illustrated by Praetorius in 1619. There is little doubt that the 'Ordinary' neck and 'Venetian' neck were alternative necks for the same body - a body of about the size of the surviving 'Aylesford' cello. This is because the pegbox is the same size on each (as the Hills observed on page 129). Considering that the 'Venetian' neck-plan and the 'Aylesford' cello are both dated 1696, it is possible that this neck-plan was drawn specifically for this very cello. The 'Ordinary' neck-plan is dated 1707. The 'Model B' (meaning 'good model') parts fit very well the smaller (and now standard) size cellos that Stradivarius was making from about 1709 onwards.

For comparison, I have drawn the Barrett 'Berkswell' cello of 1720 that was described in the Galpin Society Journal of March 1984. I have left out the presumably added part of the fingerboard-wedge, and I have presumed that the given neck-length included the bit left off the end of the pegbox. The bridge-height of 83mm that I arrived at, is rather different from the 'less than 5cm' estimated by Eric Halfpenny. The fingerboard is unusually long for this date - it is like a late-18th c. length.

CONCLUSIONS

1 According to the surviving plans, there were no wedges between the neck and fingerboard of the Stradivarius cellos, even in the earliest plan dated 1684. Even though the plans are not of the complete cellos, it is obvious that there is no room for a wedge, and no need for a wedge - the neck is quite thick enough as it is. Judging from pictures of the mid.-17th century and later, it was common for cellos to have no wedge.

2 Judging from the neck-plans, and the supposed neck-foot guide, the cello neck-button was larger than the collar at the other end of the neck. This differs from the statement by Sacconi on page 136, that the cello button and collar both had the same diameter (which is the relationship used on modern cellos).

3 The cellos (including the Barrett), with their original necks, fingerboards and tailpieces, are well-balanced designs, in the length-wise proportions, and in the angle and shape of the neck. Some of this good balance is sadly missing when the cello is altered to its modern form. In my drawings I have pointed out some of the proportions.

4 Only one of the four Stradivarius cello necks is shorter in proportion to the body than on a modern cello. The 'Venetian' and 'Model B' necks are longer, and the 5-string neck is possibly
about the same in proportion as on a modern cello. Only in the 'Ordinary' model is the neck short. It is possible that the 'Ordinary' model was of the proportions that were most commonly used for cellos up to that time. (Cellos of about these proportions appear in many early pictures.) The same proportions (neck = 1/3 length of the body) also seem to have been common on violins and violas. One disadvantage for a cellist playing a cello of this proportion is that the 'fourth position' of the left hand (with the first finger a 5th above the open string) is uncomfortably over the body. On the 'Venetian' cello, the much longer neck brings 'fourth position' into a position similar to that on a modern cello, so that the thumb in its corner can be comfortably under the first finger. Judging from music of the late 17th century, it seems likely that it was about this time that 'fourth position' began to be an important part of cellists' technique. So perhaps this was the reason for the 'Venetian' design. A drawback of the 'Venetian' design is the great length of vibrating string, which means an uncomfortable stretch between the fingers of the left hand. The 'Model B' cello maintains the handy placement of 'fourth position', while reducing the vibrating string to its modern and comfortable length. (All that remained to aid the cellist's ease of playing was to thin the neck.) So it seems likely that the standard modern cello not only derives its body size and shape from Stradivarius' 'Model B', but also its vibrating string length.

In Comms. 546 and 562 David Crookes repeats the widely-held view that the baroque solo cello was most often gripped between the legs (i.e. supported by the calves of the legs). This view is mostly based on information given by post-baroque writers. The earliest dated cello method is from 1741, and there is little written earlier than that about methods of holding cellos. By far the largest body of information on this subject earlier than 1741 is to be gleaned from iconographical sources. I made a collection of pictures dated earlier than 1800, showing a total of 235 cellos. In this collection it is interesting that out of the 34 assessable cellists dated between 1663 and 1730, only one holds the cello between the legs. (The cellists are of all sorts, e.g. orchestral, chamber, domestic, fairground.) The general trends shown by the pictures are: (1) During the 16th and 17th centuries, a strong preference is shown for the cello to rest directly on the ground. (2) The first half of the 18th century shows a trend for the cello to be raised off the ground, usually by means of a spike, or (after 1730) by gripping the cello between the legs. A small number of cellos are held in other ways, e.g. supported on some item of furniture. By the second half of the 18th century, the most popular method of support was between the legs, although this still accounts for only a half of the cellists from this period that I have in my collection. The so-called baroque-cello-grip is probably far more valid for Mozart, Beethoven and Mendelsohn, than for Corelli, Bach and Handel!
some early violoncellos

Mark Smith 1984
Response to Crighton’s Comm 559

In Comm 559 Garry Crighton
1. reminds us that I had the last, but not the concluding word on the issue of Praetorius’s statement on English viols,
2. retranslates some of Praetorius’s words (without attempting to do the whole passage),
3. reiterates the sense of Nicolas Meeus’s translation and first interpretation, which is that the English always tuned like the Germans, but when playing by themselves, transposed down by assuming a higher tuning of their instruments,
4. claims that this transposition is very practical because the treble viol (presumably smaller than the "Cant" viol of Praetorius) was not very common; this echoes Meeus’s second interpretation,
5. argues that the distinction between transposing down a fourth or a fifth was of little consequence by citing other German and mostly Italian sources on viol tunings,
6. explains the relevance of 5. by strong Italian influence on English court music in most of the 16th and the early part of the 17th centuries,
7. endorses the conclusion of Herb Meyers (E.M. Aug ’84) that Praetorius’s Cammerthon/North German Chorthon standard was about a semitone higher than modern.

With respect to 1, Crighton is correct since my Comm 491 had not convinced all (Nicolas Meeus I know for one), probably because I had not properly discussed the interpretation of Praetorius’s statement given in point 3. I hadn’t taken it seriously because I expect Praetorius to write things that were true. This is corrected in my Comm 597 in this issue. Crighton’s point 2 does not materially change the interpretations except that if Praetorius’s “also” could mean “for example”, then the situation is less clear and some of the detail in my scenario on p 38 in Comm 442 would be unnecessary.

In this Comm I want to argue with Crighton points 5, 6 and 7. My arguments with point 4 are in the following Comm (596).

Of the authors on viols that Crighton cites, the only ones who discussed transposition were Gerle, Ganassi and Virgiliano. The fact that different authors give different tunings is not an argument for transposition between them because they probably played different repertoires. Discussing sets of viols, Gerle and Ganassi gave instructions for fourth transposition by changing the assumption of string pitches. Gerle specifically stated that this was to bring music that was too high onto the ranges of the viols, and Ganassi’s reason was probably similar (i.e. when the music was too low). Ganassi also gave instructions for transposition (by the same means) of a tone upwards when the music had two flats. This was probably to provide familiar fingering to facilitate extemporaneous division. Virgiliano mentioned transposition of various intervals by viols and various wind instruments, most probably to facilitate mixed instrumentation. The only relevance to the issue at hand that all this has is that the means of transposition (i.e. changing string pitch assumptions) proposed in Crighton’s point 3 follows that of Gerle and Ganassi.

But the transposition of a fifth that Praetorius is supposed to have written about was not mentioned by these authors. It must have been more convenient than a fourth at times. The probable reason is that transposition of a fifth could be done in an easier way that was so obvious it didn’t need instruction. The mensural music notation system with G C and F clefs a fifth apart seems almost to have been designed for fifth transposition by clef substitution and adjustment of the key signature by a flat or a sharp. Even octave transposition is more difficult (except perhaps for the voice and for instruments that finger the same in different octaves). To transpose a fourth, Gerle and Ganassi found that on viols it was easier to relearn the notes on the fingerboard than to combine transposing a fifth in the wrong direction (by clef substitution) with
coming back an octave. Only with viol tunings purely in fourths, such as those of Jambe de Fer, can fourth transposition by shifting strings be as easy as fifth transposition by clef substitution. There certainly is a difference between transposing a fourth and a fifth on the viol. (Even on keyboards, I am sure that it is no accident that non-aligned keyboards differed by a fourth, not a fifth).

As for Italian influence in the English Court, the article by Peter Holman (Proc. R.M.A., 109, (1982-3), 39) on the Royal string band indicates that the duties of the band primarily involved playing fiddles for eating and dancing, though some of them were active with respect to viol playing and composing. The players seem mostly to have been in four families of Sephardic Jews from Spain and Portugal who sported Italian names since that is where they were recruited from late in Henry’s reign. There was no influx of new string players from Italy late in the 16th and early in the 17th century, so there is no reason to expect the Royal string band to have had any leading role in keeping English music up to date on Italian musical fashions. Indeed, the decline of the viol played in sets in Italy then was the reverse of what happened in England.

The trouble with Herb Meyers’s article in Early Music about Praetorius’s primary pitch standard is that he is wrong; that is unless he can demonstrate how in spite of the work of Ellis, Thomas and Rhodes and Bunjes, the pitch pipe data can reasonably be stretched to a’ = 460 Hz. I would be very surprised if it could. I’ve written a full rebuttal which will appear in Early Music May 1985. The essence of my argument follows!

It is beyond doubt that the pitch-pipes and the Nuremberg trombone refer to the same standard, and any claim to have determined that standard needs to not conflict with either of the two types of information. The pitch-pipe information was nicely summarized by Gwynn in Comm 342. It is easy to make the trombone information fit it by noticing that Praetorius’s plate shows the trombone body plus a detached mouthpiece, a semitone-length tuning shank and a tone-length crook. Praetorius’s preferred pitch standard was a tone lower than his primary standard, and it is reasonable to expect that his trombone used the crook to go from one to the other. It is conceivable that the semitone shank was there for occasional use in awkward transpositions, but it is rather more likely that the shank was in all the time to adjust between the highest local pitch standard (Cammerthon in Praetorius’s case) and the highest standard that a production-model Nuremberg trombone was designed to encounter (probably Venetian pitch). Therefore, the tuning shank was probably always in when the trombone was used in Praetorius’s music making, and so it would have been in when the trombone was used to sound the pitch standard. The hypothesis of Meyers can be taken seriously only if he can similarly show how the pitch-pipe information can reasonably fit it.

It is a pity that Andrew Parrott’s important article on transposition (E.M. Nov. 1984) is marred by his uncritical acceptance of Meyers’s conclusion (fn 93). I’ve seen a draft of a potentially quite useful monograph on Bach’s pitch standards from a wind-instrument point of view that is similarly marred. The Meyers hypothesis seems quite attractive, especially to other wind people such as Crighton. I appreciate their difficulty in trying to make sense of the pitches of surviving wind instruments, and their reluctance to accept that most of these could be wind-band instruments and consequently not part of the main-stream of the mixed-instrument early music that is popular today. We can’t let them push the whole Early Music field around with poor scholarship.
Musicians usually get their ideas about what the authentic ways of using instruments were from being told by someone they respect, rather than critically reading the published scholarship. (They respect instrument makers and this is why it is important that we have a responsibility to be informed on this matter). The latest fashion is to believe that one can authentically perform English viol music by transposing downwards and dispensing with the treble viol. The prime instigator of this idea has been Andrew Parrott, who has been giving lectures promoting this idea. Though Andrew can be thoroughly scholarly when he wants to be (e.g. his article on transposition practices in the latest issue of Early Music), his lecture on the subject of English viols that I heard was rather a subjective mixture of information and opinions that didn't quite hang together in a scholarly way.

The essence of Parrott's thesis (as I understand it) is that early viols were bigger than modern ones, the treble viol as we know it doesn't blend with the other viols as well as it should, and Praetorius wrote that English viols in sets played at a pitch a fourth or fifth low. Consequently we should dispense with the treble viol (adding the double bass at the bottom) and play English viol music transposed down accordingly. In Comm 490 Meeus proposed this idea and in Comm 559, Crighton echoes it.

Let us examine this proposition more closely. It could mean using the modern tenor viol with string stop of about 50 cm having the first string tuned up a tone to a' (at 440 Hz) for the treble parts, the modern bass of about 70 cm string stop tuned to d' as usual for the tenor parts, and a 6-string double bass viol of string stop of somewhat less than 100 cm tuned to a for the bass parts. The music is read as if the viol in a' were a treble tuned to d", the viol in d' as if it were a tenor in g' and the viol in a as if it were a bass in d'.

Sizes before c. 1580:

This combination of string stops, absolute string pitches and nominal (i.e. assumed) string pitches is really quite a good approximation to how a typical mid-16th century set of viols (such as that of Ganassi) operated, as the surviving evidence leads us to believe. It does seem that the modern tenor viol is approximately the same size as the treble viol then, the modern bass viol the tenor viol then and the modern double bass the bass then. Also, as later, between the tenor and bass sizes of a set, there were other sizes, also called "basses", which were mostly used for solo or mixed-ensemble purposes. Whenever there was possible ambiguity between the solo basses and the larger basses used in sets, the latter were also called "contrabasses" (this is evident in the writings of Ortiz and Ganassi). Another possible source of confusion at that time was the obvious ability of the tenor viol in this set-up to play the bass line in a different ensemble working at a pitch standard close to modern.

The main differences between the above Parrott set-up and that of the mid-16th century would be in the designs of instruments and bows, in playing style, and in the stringing. Each of these, of course, leads to a different kind of sound. This mid-16th century viol usage was probably current in England as well as elsewhere, and it is likely that the textless polyphony from before the final quarter of the 16th century (including composers such as Tye, Taverner, Tallis, White, Parsons, etc) was played on viols this way.

Transition to smaller sizes:

The last quarter of the 16th century was a period of transition. Roped-gut (catline) bass strings became generally available. While an open-string range of about two octaves and a tone was previously available with gut stringing on a single string stop, catlines added another fourth to this range. The new range was made more attractive by
the new bass resonance offered by the soundpost. The viols could respond to these developments in three alternative ways: Keeping the same kind of sound for the lowest pitch, they could either lower the pitches on instruments of the same size or they could use the same pitches on smaller instruments. Alternatively, they could keep the same sizes and pitches and used the more powerful bass register to advantage in appropriate acoustic environments. The viols that played in sets usually chose to drop in size, and new smaller sizes about half-way between the old sizes were developed, with string stops of about 40, 60 and 80 cm for the treble, tenor and bass viols respectively. These sizes seem to have remained standard throughout Europe for most of the 17th century.

In some circles when viol sets in the new sizes played on their own (e.g. English viols according to Praetorius), the mid-16th century practice of using high nominal pitches and low absolute pitches persisted. When viol sets were used in mixed ensembles, if the pitch standard was close to modern (as in northern Italy and Germany), the more appropriate string pitches a fourth lower were assumed. If the pitch standard was a tone or minor third lower, these new viol sets were small enough to be tuned up the two or three semitones to reach that standard and keep the high nominal pitches. The latter was the case with Roman and French viols (as reported by Mersenne), and whenever viol sets played with lutes of the most common size, called “mean” in England. The English church organ with a standard 10 ft pipe specification for the “double C fa ut according to ye keys” sounded a bit more than a major third lower than modern, and if viol sets played at that standard, only tuning up of about a semitone would be required.

In addition to the standard sizes, there were smaller sizes of bass viols (including the old tenor size) that were mostly used for solo and mixed ensemble work. The old 100 cm bass size was still useful, both as a more powerful bass at the old absolute pitch level (e.g. the violone in Italian continuo), or lower as a new low bass an octave below the tenor (Praetorius’s Grosse Bass viol). New larger contrabasses were developed to exploit this new exclusively 16 ft pitch option (i.e. always reading bass clef an octave lower) more powerfully.

A new high treble that was half the size of the new tenor was developed in Italy, probably mainly as a soloistic competitor to the violin. It decidedly lost the fight in Italy, but it took root in England, where mastery on the violin was much more elusive. Evidence for its English presence exists from the 1630’s (see Harwood in E.M. Oct. 1981, p 473) and c 1660 (see E.M. Nov. 1984, p 529, where a French alto viol a tone below the treble seems also to be depicted). The high treble viol flourished in 18th century France as the pardessus de viole.

Late 17th century sizes:

Before discussing the English viols early in the 17th century in more detail, let us first look at the more definitive size information from late in that century. The Talbot ms (see Comm 382) and Simpson’s “Division Viol” give us clear information on size; string stops of 32 inches (81 cm) for the Consort or Single bass, 30 inches (76 cm) for the division type of solo viol, 28 1/8 inches (71 cm) for the lyra type of solo viol, and 24 inches (61 cm) for the tenor viol. Treble viol measurements are missing, but Talbot quoted Mace saying that the treble viol string stop should be half that of the consort bass. The string stop of the Double bass viol (or Violone) was 40 1/8 inches (102 cm).

These stated measurements are quite consistent with what can be measured from Praetorius’s scaled drawings and surviving English viols (see Comm 175 and 187). This is the basis for the claim made above of standard sizes in the 17th century. There is no question that Praetorius’s “Cant” viol would have been called a treble viol in England late in the century. But what about the high treble viol then? Mace and Playford (in “An Introduction to the Skill of Musick” discuss the three sizes of viol in a set and don’t mention it. The reason is likely that the high treble viol was not part of the main-stream of viol playing in sets, and whatever playing of it then was of a soloistic nature. It is possible that Talbot, who was trying to be more comprehensive, left out
measurements of the treble viol because he hadn’t sorted out the inconsistency between hearing about two different types, but there is mention of only one in the authorities he read (which included Praetorius, Mersenne, Kircher, Playford, Mace and Simpson).

Early 17th century sizes:

Rousseau, writing in 1687, stated that the earliest viols in France had five strings and were very large, and that the English reduced the sizes of their viols before the French did. Since Rousseau wrote about a reduction in size rather than an increase, we can conclude that, as far as he knew, the set of small sizes using the high treble viol, as postulated by Harwood (E.M. Oct. 1981), was never main-stream practice in England. We know the final sizes but when the size reduction occurred needs to be discussed.

Mersenne’s bass viol in 1635 was 4.5 Paris feet (148 cm) long (while Talbot’s was 53.5 inches (133 cm), as was Praetorius’s). This is about half-way between the old and new sizes. At least this shows that the French had started changing by then and that the English did earlier. Mace wrote that old viols “are found to be far the best” and those in highest esteem, were those by Bolles and Ross. It is likely that “Ross” was John Rose who died in 1611 (see E.M. Oct. 1976, 504). Since the sizes of his instruments conformed to Mace’s expectations, and tenor viols by Rose of the later size made in the 1590’s survive, we can conclude that the size change was at least well under way by then. In Woodfill (p259), we read of a payment “For carrying three viols to York to get them cut” in 1617. A change can take a long time to run its course.

Oliver Neighbour in "The Consort and Keyboard Music of William Byrd" (1973) points out that, excluding dance music, between the phase of composition for sets of instruments lasting from about 1550 to 1570 and the phase starting just after 1600 associated with composers such as Thomas Lupo, the younger Ferrabosco, Coprario and Gibbons, “nothing of note was added except by Byrd, who continued . . . till 1590 or so.” This apparent gap in the popularity of sets of viols in England could easily have provided an opportunity for old-size viols to be neglected, and so more readily be replaced when interest revived.

Late 17th century pitches:

Now let us consider nominal and absolute pitches of sets of viols in England during the 17th century: Mace (1676) and Playford (1674 – I have not examined other editions, the earliest of which I know is 1655) each mention three sizes of viols, each with six strings tuned in fourths with a third in the middle, and with highest strings at d”, g’ and d for the treble, tenor and bass viols respectively. The Talbot ms agrees except that the tenor viol tuning is given at a tone higher, a fifth above the bass. This is either a mistake (taken from the Italian tunings given by Mersenne which Talbot quoted elsewhere) or his informant indulged in an unusual practice. The statement by Mace about string-stop proportions between sizes is associated with the tenor being a fourth above the bass, and Talbot’s measurements fit it perfectly.

Playford specifically related size name with the musical notation by stating that the treble viol played from the G clef, the tenor from the C clef and the bass from the F clef and the C3 (alto) clef. About the bass viol, Playford stated that one tunes the “smallest string as high as conveniently it well bear without breaking.” With the tunings given and the string-stop proportions given by Mace, this will automatically be the same for all of the sizes, irrespective of string diameters. From the sizes given by Talbot (and implied by Simpson) and the relationship between absolute pitch and string stop for the highest string in a survey of all the gut-strung instruments depicted by Praetorius, we deduce that the nominal tunings given by Playford and Mace are about a tone below Praetorius’s Cammerthon in absolute pitch. For current purposes, I will not distinguish between Praetorius’s Cammerthon (c. a’=430 Hz.) and modern pitch (a’=440 Hz.).

Playford’s instructions here were obviously for playing without an organ, for otherwise
he would have indicated that the pitch should be taken from the organ. Mace strongly implied that most viol playing in sets was with an organ or harpsichord at that time. It is nevertheless unlikely that any more than touch-up tuning would have been expected when Playford’s viols played in consort with a keyboard instrument. So what Mace called “Consort Pitch” (p205) was probably a standard about a tone lower than modern. Talbot provided measurements of three organ pipes in “Chappell Pitch” and calculation indicates that this church organ pitch was a fraction of a semitone lower than modern. It seems that these two pitches were about the same as the two pitches a tone apart that Praetorius worked with.

Early 17th century pitches:

There was no English tutor for the viol written early in the 17th century. The title page of Robinson’s "Schoole of Musicke" (1603) promises such instruction but gives little. What it does have is very useful nevertheless. This includes instruction on how to hold the bow. Because this is the only such instruction relevant to the important early baroque viol repertoire, and it is either not known or ignored in favour of late-baroque practices, I reproduce it here in full:

Hould your bow or stick, hard by the Nut of it, with your forefinger, above the stick, your second and third finger (in the hollow of the Nut) betwene the heire and the stick, and your little finger beneath the heire, slack quite from it.

Following this are nine exercises in mensural notation with sol-fa indications under each note, and below each is a duplicate in six-line tablature with fingering indications. On one of them the mensural-notation part is prefaced by "For the Viol by song" and the tablature part by "For the Viol by Tableture". We have no reason to suspect transposition between the two parts, so we conclude that five of the exercises are for a viol with highest string at d’, three at g’ and one at d”. This is the same set of nominal tunings as was used later in the 17th century. The music from early in the century will not allow nominal tunings much different from these.

It is remarkable how small is the amount of information on early 17th century English viols that has survived. There are many puzzles! For instance, I know of no source other than Praetorius to indicate that there were more than five strings on the treble viol (Hume’s 1605 tablature only uses five, and I’ve never found a need for a 6th in my playing of the repertoire). Also, lyro viols differed from other solo bass viols in more than stringing and tuning (in Woodfill, p 258, we read that the Earl of Cumberland in 1614 bought a bass viol from Mr Sperley and a lyro viol from Mr Coprario), but we don’t know in which ways they differed. Another puzzle is that the viols in illustrations don’t much look like the ones that have survived.

We also don’t know much about transposition skills. It may be unwise to expect people who only play repertoire already comfortable on their instruments to learn to transpose. The bulk of the repertoire used by viol players was of this type - instrumental music written for viols or music for voices (madrigals) or for miscellaneous instruments where the nominal pitches and keys are comfortable on viols. Mixed ensembles involving voices and other instruments with viols are more likely to have required transposition.

Viols with voices:

About half of the published madrigal books state that they were apt for viols and voices. This probably implies that mixtures of voices and viols were expected. Even what appears to be purely instrumental repertoire was also sung (e.g. the title to B.L. Ms Add 31390 states "...solfange songs ... for voices and instrumentes". The flexibility afforded by substituting viols for missing voices could have been an important factor in the popularity of printed madrigal books. It is significant that this popularity occurred after viols became smaller.
The intermixing of viols and voices could put constraints on the pitches of the viols. An opinion I’ve heard is that vocally, this repertoire is often uncomfortably high for normal voices if sung at modern pitch, and it is similarly uncomfortably low a fourth down. The latter argues that the fourth-low practice for viols performing alone mentioned by Praetorius was not how they were tuned when used with voices singing their usual parts. The viols would then either have tuned higher or transposed higher than in that practice. The treble parts often go up to a”, so tuning higher would be preferred to transposing because the latter requires fingering that goes past the fretted portion of the treble viol’s fingerboard. The viols could tune as high as about a tone below modern (the Consort-Pitch standard) because of their sizes, and this seems to be a comfortable pitch for singing madrigals.

Now let us look at the repertoire for one or two texted high parts plus three or four untexted lower parts, nowadays erroneously called “Consort Songs”. Considering the title of BL Add 31390 mentioned above and Morley’s strong intimation (in his “Introduction”), that textless polyphonic parts were often vocalised without words, and that all of the parts in this repertoire fall comfortably into standard vocal ranges, it is most likely that all-vocal performance was at least a recognized option. Evidence for instrumental participation is in Byrd’s “Epistle to the Reader” introduction to his fully texted “Psalms, Sonnets and Songs” of 1588, where he stated that the music, though "originally made for instruments to express the harmony, and one voice to pronounce the ditty, are now framed in all parts for voices to sing the same". Modern tradition is that the instrumental option was the exclusive intention throughout the repertoire being considered, and that the instruments involved were viols. Unwarranted as this tradition may be, it is likely that viols were used whenever convenient, and it is worthwhile to consider what the conditions for convenience could have been:

An important part of the repertoire of concern comes from before the size change in viols. About two octaves and a tone seems to have been the maximum open-string range on one instrument that was allowed by the gut strings that were generally available then. I will assume that the viols used then in England all had six strings because that was the Italian norm and viols were introduced from Italy and not France (where the norm was five strings). Six-string viols had an open-string range of two octaves in their tuning, so there was a retuning flexibility of about a tone on each viol. If the set of viols was properly proportioned in string stops (proportioning could be helped by shifting the bridge, as indicated by Ganass, this retuning flexibility was retained by the whole set. Difficulties in proportioning could easily use up this flexibility and leave none.

The sounding pitch of the music would then be about a fourth or fifth lower than written pitch according to modern standard. The voices would then be adult male countertenor and tenor. This disagrees with Philip Brett’s conclusion (in his “Consort Songs” editions in the Collected Works of William Byrd and in Musica Britannica XXII) that this music was intended for treble and mean boy voices with viols. (Incidentally, Brett’s using an "alto viol" in his scoring is completely without foundation.) The music rarely explores the high frets on the treble viol’s first string or the low notes on the bass viol’s sixth string. So transposition on viols of up to a fourth (and occasionally a fifth) is often possible, but it could not have been routine. There is no evidence of deliberate allowance for transposition here.

Later sources of this type of repertoire would presumably have employed the smaller viol sizes, so a pitch from about a tone below to a sixth below modern could be negotiated by retuning strings. The highest of these would be appropriate for voices singing parts in their normal madrigalian ranges, and a low one of these possible pitches could be chosen if a singer wanted to sing a part which was apparently written for a voice-type one or two steps higher. The lower part of the range would be used to perform the earlier repertoire at the same pitches as would have resulted from using the larger viols.
There is evidence (e.g. "Birds Galliard" in Holborne's "Cittharn School") that many English viol players probably had enough general training in practical music to transpose by a fifth using clef substitution. This could as well have involved a change in viol size when an appropriate instrument was available. Many of the songs with viol accompaniments would still be playable with this transposition on a standard set of viols. A flexibility of up to a fifth in tuning the strings of the viols, plus perhaps transposition of a fifth, could well have provided practical solutions to problems of accompanying a voice in a variety of pitch ranges.

Consort lessons:
The consort lessons of Morley and Rossetter specify the use of treble and bass viols as well as treble lute, cittern and bandora. The three plucked instruments seem to have usually played at a pitch which was close to modern. The treble viol would not be tuned at the fourth-lower standard Praetorius mentioned and transpose up because the music then goes way past the frets on the fingerboard, and the plucked instruments could not effectively transpose down or tune down a fourth. Consort pitch seems to be a particularly effective compromise. Of course, if the treble viol player could transpose up a tone, the plucked instruments would not need to tune down (there is no problem with the bass viol in this ensemble since smaller solo bass viols were plentiful, and they could be used at a higher standard than consort pitch).

Though the nature of the ensemble that went by the name "consort" was rather different in early and later parts of the 17th century, the pitch standard of each seems to have been governed by how high an ensemble viol could comfortably go. So it is not surprising that the standard seems to have been the same.

The conclusion I come to from all this discussion of transposition is that the occasions needing it for players of viols in sets were usually rare. The only transposing skill we have evidence for is the most primitive kind, transposition of a fifth by clef substitution. Transposition within a range of up to a fifth by retuning strings was available on the smaller 17th century viol sizes if needed.

Size-shifted sets:
As for transposition of a fourth by playing on a size smaller or larger than the one assumed for reading the music, this would be easy if the extra sizes (high treble or double bass) were available and if one didn't mind retuning some of the viols by a tone to properly adjust the relative tunings. It is most likely that the novelty value of such shifted sets would have been explored when the extra sizes were available. The question of concern here is whether shifted sets were more than just novelties, as Ian Harwood has suggested for the treble-shifted set and Andrew Parrott (and Meeus in his second interpretation and Crighton) seem to suggest for the bass-shifted set.

Saying here that Parrott advocates a bass-shifted set of original 17th century sizes is inconsistent with my statement that he advocates a bass-shifted set of modern-sized viols at the beginning of this Comm. My impression is that he wants to blur the distinction between the two, perhaps as a practical expedient so as to use the viols that are available in his concerts. I doubt whether Parrott would argue that modern viol sizes are authentic for the 17th century, but rather that one can play authentic pitches on them. Below I will argue against any serious popularity in the bass-shifted set in early 17th century England, and against the idea that modern viols producing authentic pitches would sound authentically.

Footnote 19 of Harwood's "Double Standards" article (EM Oct. 1981) refers to Tobias Hume's use of viols in "Poetical Musicke" (1607), where one of the possibilities for performance is stated to involve "two small bass viols" playing from tablature and tuned a fourth higher than a "somewhat longer" bass viol apparently in nominal d' tuning playing from mensural notation. The piece under discussion specified that a mean lute
should play the ground with the longer bass viol. Harwood’s Footnote states:

"An alternative interpretation suggested by Andrew Parrott is that the large bass viol should be the "great Double Bass" called for by Gibbons for one (the number is actually nine) of his fantasies, with the normal bass (Talbot’s 32-inch model) playing the tablature. This would simply be calling the latter instrument a ‘small bass viol’ (as Praetorius did), which seems rather unlikely. Furthermore, some of the chords required in the tablature parts throughout the books would be extremely difficult to finger with a string length of 81 cm. This is why tablature-playing viols were generally smaller than the large basses. Finally, the music would sound a 4th below the nominal pitch and the bass lute would be required, not the mean lute as specified by Hume."

Harwood’s points on chord finger stretch and the mean lute are perfectly valid. A further point to be made involves Hume’s piece entitled "passion of Musicke" in the same volume. To the same three bass viols, he added a part in mensural notation labelled "this part is for the treble viole or the voice", apparently for d nominal tuning, an octave above the longer bass. Playing a tenor viol as if it is a treble viol (as Parrott would have it) is one thing, but calling it a treble viol is a much more serious matter. The treble viol existed as an article of commerce (e.g. see Wordfill, p 253) and there couldn’t have been any ambiguity as to what the term meant.

If Parrott wanted to argue that the later tenor viol was the treble viol of the time, he can be shot down in many ways. One is that the 60 cm stop of the instrument wouldn’t let the first string go up to a' in Cammerthon as Praetorius indicated. There is no question that the instrument called "treble viol" in England then was the same size as Praetorius’s "Cant" viol. The only question to argue is whether the set of standard sizes or the bass-shifted set dominated English viol playing. If both treble viols and double basses were commonly available, more music like the Gibbons Fantasias which span over four sizes would have been written. So either the double bass or the treble viol was relatively rare. One measure of popularity is whether an instrument is specified (preferably without alternatives) in a printed music book. Printing was a commercial operation and publishers had to be sure of widespread appeal. Since several English printed books specified the treble viol and none specified the double bass, the non-shifted set is the choice.

The only real evidence Parrott might think he has is Praetorius’s statement about English viols. I am sure that he (and Meeus in his second interpretation and Crighton’s point 4) is reading something into that statement that it does not contain. They must be thinking of modern sizes, not being able to accept Praetorius’s own German relationship between pitches and sizes. In the first part of the statement mentioning English nominal tunings (see the following Comm), Praetorius used the terms "kleine Bass", "Tenor und Alt" and "Cant". Because he included "kleine Bass", there is no reason to doubt that he was referring to specific viol sizes as he illustrated them and not musical parts that could be played on any size of viol. After his "Do sonsten" (otherwise) he used the terms "Bass", "Tenor und Alt" and "Cant". Because of parallelism with the same terms used before, it is quite clear that he was referring to the same set of instrument sizes. Besides, the new Cant (old Tenor und Alt) of the bass-shifted set is too large to tune to the specified pitch in Cammerthon. There is no ambiguity about which sizes of viols he was writing about. So why would one even think of an alternative bass-shifted set? One looks at the pitches in Praetorius’s table, one thinks of modern viol sizes, and the only way one can imagine the viols to work is to have a bass-shifted set. This is probably without seriously considering that this conclusion condemns as unworkable what Praetorius reported was standard German practice.

Practical demonstration:

For some months now we have had a set of a treble, two tenors and a bass viol of 17th
century sizes and English construction (made at NRI) playing together regularly at our home. The stringing is all gut (of course) with normal viol tensions at Consort pitch (a tone below modern). The tone and balance at that pitch is beautiful without the shrieking treble of modern sets that offends me as much as Parrott. Early on we tuned down a minor third to explore what Praetorius was writing about. The strings were quite slack but no-one has since thought of tuning up to the higher pitch again. There is a dark vibrancy to the sound of the ensemble that lives up to everything Praetorius wrote about it. It was surprising to find that the tuning stability was at least as good as is normally the case with viols. We played these viols at this lower pitch at a concert recently and the effect on the audience was truly gratifying.

Modern compromises:

I am now led to believe that the sound of English viols that Praetorius wrote about was not just due to the pitch, or even this pitch combined with the sizes of viols (i.e. the relationship between the music and the resonances of the instruments). His own viols had these. In addition, there was the low string tension and the thin bent-stave construction of the soundboards that was particularly English.

If one wants to make a practical compromise to get as close as one can to the original sound with modern viols, just getting the pitch right, as Parrott would have it with a bass-shifted set, is not the best solution. Tuning down a minor third gets the tessitura of the music right relative to the sizes and resonances of the instruments, and also gets the string tensions right. Getting two of the four factors right is better than one. Francis Baines (of Jaye Consort fame) has been trying to get viol players to do this for many years now, with not much success. We ought to give Francis’s idea another chance.

SUMMARY TABLE OF NAMES, SIZES AND PITCHES OF VIOLS

<table>
<thead>
<tr>
<th>Names</th>
<th>Typical String Stop</th>
<th>Gut Pitch at a' = 440 Hz.</th>
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<tbody>
<tr>
<td></td>
<td>inches</td>
<td>cm.</td>
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<tr>
<td>--- high treble</td>
<td>12</td>
<td>30</td>
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<tr>
<td>--- treble</td>
<td>14</td>
<td>35</td>
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<tr>
<td>--- treble</td>
<td>16</td>
<td>40</td>
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<tr>
<td>--- French alto</td>
<td>18</td>
<td>45</td>
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<tr>
<td>--- tenor</td>
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<td>50</td>
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<tr>
<td>--- tenor</td>
<td>24</td>
<td>60</td>
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<tr>
<td>tenor solo bass</td>
<td>28</td>
<td>70</td>
</tr>
<tr>
<td>solo bass bass</td>
<td>32</td>
<td>80</td>
</tr>
<tr>
<td>bass double bass</td>
<td>40</td>
<td>100</td>
</tr>
<tr>
<td>(contrabass) (violone)</td>
<td>48</td>
<td>120</td>
</tr>
</tbody>
</table>
The question of what Praetorius wrote about English viols has clearly not been settled to everyone's satisfaction. Nicolas Meeus (private comm) was not convinced by my reply (Comm 491) to his Comm 490. I think neither of us fully understood what the other was on about. Crighton's Comm 559 has spurred me on to write this long overdue attempt at a clarification.

Following is yet another non-definitive English version. It is largely Meeus's translation with some changes, mostly those suggested by Crighton. It is divided into three points to make subsequent discussion easier:

1: "The English, when they play something on viols alone, make everything sometimes a fourth or sometimes a fifth lower,

2: "for example they consider the lowest string of the small bass as D, of the tenor and alto as A, and of the treble as e, while otherwise each one is tuned a fifth lower (thinking in Cammerthon), namely the bass in GG, the tenor and alto in D, and the treble in A, as can be seen in the table above.

3: "And this gives in this tuning scheme a much more pleasant, magnificent and majestic harmony than if one remained in the ordinary pitch."

Praetorius seems to be describing some pitch-manipulating scheme the English applied to viols when playing alone (point 1), it is different from some ordinary one (point 3), and it results in some sort of pitch being lower (point 1) than if one did things the ordinary way. What the English actually did is somehow conveyed in point 2, where a set of nominal (i.e. assumed) pitches of the strings is related to a set of absolute pitches (i.e. according to a recognized pitch standard) a fifth lower. Something about this nominal-absolute pitch business is supposed to be different from the ordinary, but Praetorius neglected to specify what it was.

In the tuning scheme being described, I understand point 1 to state that the actual sounding pitch of the music is lower (by either of the two intervals) than the pitch at which the music would sound if the nominal pitches of the strings were something else. That something else is ambiguous and I presume that it could be either "their absolute pitches" or "in the ordinary tuning". Call these possibilities 1A and 1B respectively. The first set of pitches in point 2 are unambiguously the nominal pitches of the extraordinary (i.e. not the ordinary) tuning. After the "otherwise", the second set of pitches are the absolute pitches in either the extraordinary tuning (call this possibility 2A) or the ordinary tuning (call this possibility 2B). In point 3 it is ambiguous as to whether "ordinary pitch" means the English ordinary pitch (call this possibility 3A) or the German ordinary pitch (call this possibility 3B).

Possibilities 1A or 1B can combine with 2A or 2B and 3A or 3B in eight different ways. Let us first consider the combination of 1A, 2A and 3A. This gives the nominal pitch of the bass viol sixth string in the extraordinary tuning as D and the absolute pitch as GG. We know nothing about the ordinary tuning. To simplify matters, I assume that either the nominal pitches or the absolute pitches of the two tunings (ordinary and extraordinary) are the same. This could be the reason why Praetorius had not bothered to mention more. We then have two possibilities for the pitches in the ordinary tuning. One is that the nominal and absolute pitches are both GG. Call this case I. The other is that the nominal pitch is D and the absolute pitch is indeterminate but not GG. Call this case II. The ordinary-tuning absolute pitch is not GG because we know that the extraordinary and ordinary tunings are different. In fact, it would be higher than GG because we would expect the sounding pitch of the music in the extraordinary tuning to be lower than in the ordinary one to give the reported aesthetic response, and because a
tuning in GG is about as low as one would want a bass viol sixth string to be and still give a decent sound. It turns out (I won’t bother to go through the analysis) that all of the pitches in the seven other combinations of ambiguities mentioned earlier are the same as I above.

We now have little doubt that in the extraordinary tuning the nominal pitch is D and the absolute pitch is GG. As for the ordinary tuning, we expect either case I or II. In case I, both nominal and absolute pitches are GG. When going from the ordinary to the extraordinary tuning in this case, the strings stay at the same pitch but one transposes down a fifth by assuming string pitches a fifth higher. This is the first interpretation of Meeus in Comm 490, and endorsed by Crighton. The ordinary tuning in case II is with a nominal pitch at D and an absolute pitch higher than GG (up to about a minor third higher is comfortable for a set of viols of that time). When going from the ordinary to the extraordinary tuning in this case, one reads the music with the same assumed nominal pitches of the strings but they are tuned down by up to a minor third. This is my interpretation of Praetorius’s statement as included in various Comms.

A preference for one of these two interpretations becomes obvious once one looks at the English repertoire for the ordinary tuning, i.e. for viols when they are not playing alone: the repertoires for the consort and for madrigals (at least those specifying voices and viols). Treble parts lie comfortably on the frets of the treble viol if one assumes d” (or e”) nominal pitch for the first string, but they would often go impossibly high on the fingerboard if one assumed an a’ nominal pitch. Therefore, of these two interpretations, only the retuning one consistently fits the reality of English music for viols not playing alone.

One might still argue that Praetorius meant case I. Perhaps he didn’t know what the English viols tuned to when not playing alone and just assumed that it was like the German viols. He would then also have either never seen any of the relevant music (including the many published volumes of madrigals and consort lessons), or if he had seen some, not thought about how the music would play on a treble viol with German nominal tuning. (If he had thought about it and just imagined that the English would transpose down, then this has the same effect as what he described for English viols playing alone and Praetorius would not have made the distinction he did). Or he could have assumed that the treble-clef parts in these repertoires were played on violins (his imitations of the English Consort replaced the treble viol by a small fiddle). Many kinds of error or ignorance on his part are possible. Nevertheless it is better history if we can possibly understand what an early source tells us in such a way as to minimise the number of mistakes we find in it. From a practical point of view, perhaps we may indulge in our doubts in this situation because the consequences are immaterial. Praetorius gave us very important information about the pitches of viols when played alone, and if in addition he meant to tell us that otherwise the English played as the Germans do, we know from the music that this is wrong, and so we’ll look elsewhere for guidance. In conclusion, I am not saying that Meeus’s interpretation of this passage by Praetorius is wrong, but rather that mine is better history because it conforms more with other available information.

In Comm 490, Nicolas proposed the shift-one-size-over idea advocated by Parrott (and endorsed by Crighton) but not hinted at in the Praetorius passage. I discussed this in Comm 491 and consider it further in the Comm before this one. In the latter I add a point about the string stop of the tenor and/or alto size viol of the time. Even a small one such as Praetorius depicted (string stop of 58 cm) is too long to play the role of a treble viol tuned to the specified pitch (with the first string at a’ in Cammerthon).

As for Meeus’s last interpretation (which I didn’t discuss in Comm 491), in which he speculates that the Cammerthon mentioned in the passage was some English Cammerthon divorced from Praetorius’s own Cammerthon, I see no basis for it. There might perhaps be a basis if Praetorius ever used the word “Cammerthon” to mean anything other than
his basic German pitch standard, but I can't find any such mention.

The point of Meeus's speculation concerning an English Cammerthon is that he wants the statement to describe a pure transposition practice rather than to imply any relationship between German and English pitch standards. It seems to do both, with the transposition being for an unusual purpose (aesthetic rather than practical) and done in an unusual way. Throwing away apparently specific historical information because it doesn't conform with some theory is not a good idea, no matter how attractive the theory seems to be. Data is needed to support a diversity theory just as much as a uniformity theory.

Before concluding, I would like to correct an error in Comm 491. My point 3 in support of my interpretation of Banchieri's viol tunings is invalid because Praetorius does use the term "Contrabasso da gamba" as equivalent to "Violono" on p 44 of De Organographia. This is inconsistent with the terminology on the labels of his plates. I suspect that he read Banchieri and was uncertain about the viol sizes Banchieri was writing about because the pitches given were close to those of his own viols, and following the same practice as with Zacconi's "violetta picciola", he included both possibilities: the names (including the Italian ones) used in Germany and the ones he found in books by Italian authors. The loss of my point 3 in Comm 491, while weakening my argument, has not led me to change the conclusion.
Can someone better versed in Shakespearean musicology than I am say whether the following quotation is known to be a reference to the stump? It comes from Act I Scene 4 of "King Henry VIII", and occurs in a musical context.

Lovell. 
Ay, marry,
There will be woe indeed, lords; the sly whoresons
Have got a speeding trick to lay down ladies;
A French song and a fiddle has no fellow.
Sands. The devil fiddle 'em! I am glad they're going,
For, sure, there's no converting of 'em;--now
An honest country lord, as I am, beaten
A long time out of play, may bring his plainsong
And have an hour of hearing; and, by'r Lady,
Held current music too.
Chamberlain. Well said, Lord Sands;
Your colt's tooth is not cast yet.
Sands. No, my lord;
Nor shall not, while I have a stump.

I have not seen any reference to this passage in texts mentioning the stump, but it seems to me that the word could well bear this meaning in addition to the other two.
Accuracy-historical C523
Acht R van C520(R)
Adlam D C501
Allen S 35.5
Authenticity C502;C546

Bagpipes 34.4
stolen 34.7
Baines A 34.9
Barclay R C517(R)
Barton P C542
Bassoon bore 34.8
Beare C C501
Bentsides C509;C572;C573
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Brauchli B C521(R)
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Cahusac oboe 35.5
Calendar-Moeck C516(R)
Cello music 34.13
Cheape H 34.4
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Conservation-guidance for C.
-practice 36.7
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Conversion-note names to frequency
-C551
Copal varnish C506
Cornett C505;C566(R);34.5
Cornu-Roman C542
Craighton G C559
Crookes D C507;C508;C522;C536;C546
-C560;35.3
Crowe D C535
Crowe M C535
Crumhorn-lunatic C507

Decoration-Ruckers papers C570
Dee R C501
Deja B 37.4
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Drums-stitched heads C545
Dulcina 34.7

Dulcina-Mary Rose C531
Education-NEMA sub committee 35.14
Exhibition-anatomy of C517(R)

Fingerboard-length baroque violin
-C525
Flute d’amour 35.5
open g sharp key C530
Folk instruments C520(R)
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Foster C 34.7

Genhardt K C519(R)
Gibson O C510
Goertze M C511
Gould I C545
Greenberg R C571;C572
Gretton P C502;C503;C505;C566(R)
Groom W C512
Gut string manufacture C528
strings 37.5

Hailperin P C543
Harmonium C519(R)
Harp-bog oak C560
tiny C560

Harpsichord C515(R);C539
barred soundboard C575
bentside C540;C572;C573
bentside manufacture C509
bottom screws C574
decoration C536
fingered 16' C513
Flemish transposing C537
Italian 2 manual C538
Italian double manual C569
painting and marbling C518(R)
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Henkel H C515(R);C519(R)
Henning U C558
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Hodgson M C556(R)

Hurdy Gurdy plans 34.8

Jacks-drilling bristleholes C512
Jaques Way D C539
Jenkins R C565

Karp C C548
Keys-organistrum C510
Kithara C508;C561

Langspil-Icelandic C522
Langwill L 34.4
Lee R C509
Legends-renaissance C536
Lindley C555(R)
Lund C C553(R)
Lute C558;37.5
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Roman cornu C542
Scandinavia-prehistoric sounds
- C553(R)
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